

Reverse Engineering Locks

stories of some of the greatest (and simplest) attacks against high-security locks

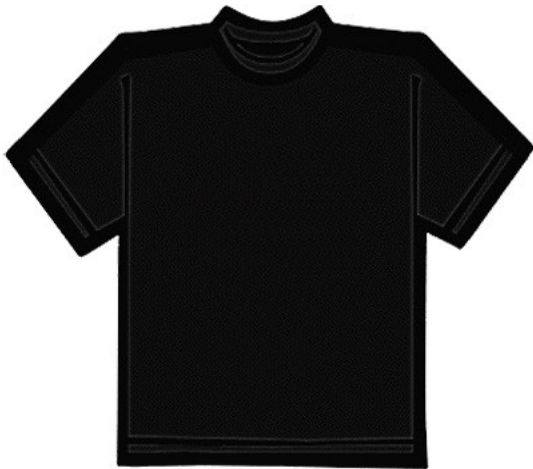


by Deviant Ollam
Event Name
XXXX-XX-XX

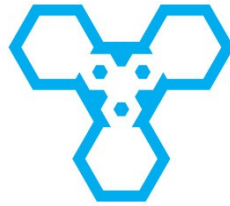
Who am i ?



Who am i ?

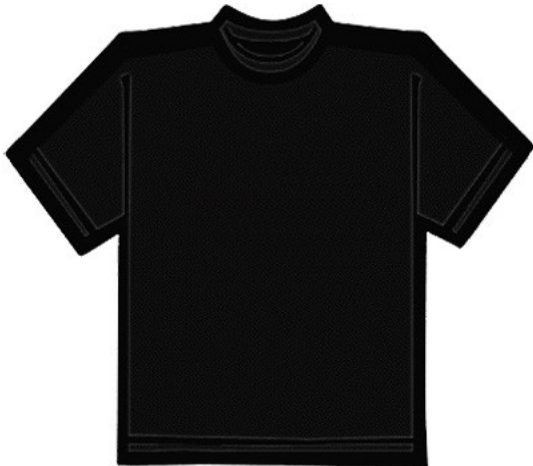


Who am i ?



**THE
CORE
GROUP**

**auditing
assessments
research
trainings**

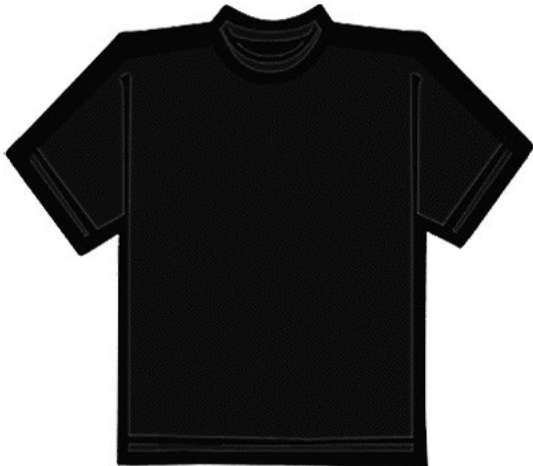


Who am i ?



**THE
CORE
GROUP**

**auditing
assessments
research
trainings**



**workshops
public lectures
lockpick village
contests & games**

Pin Tumbler Locks



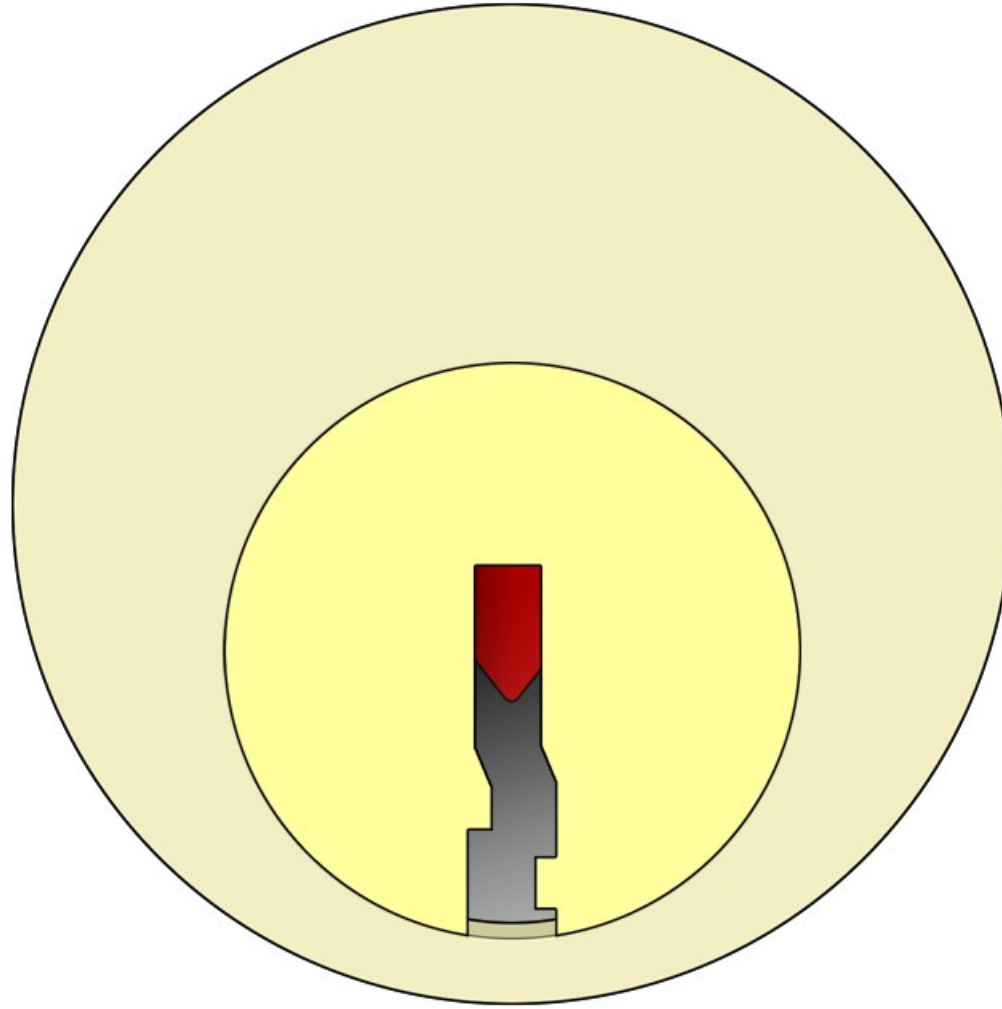
Pin Tumbler Locks



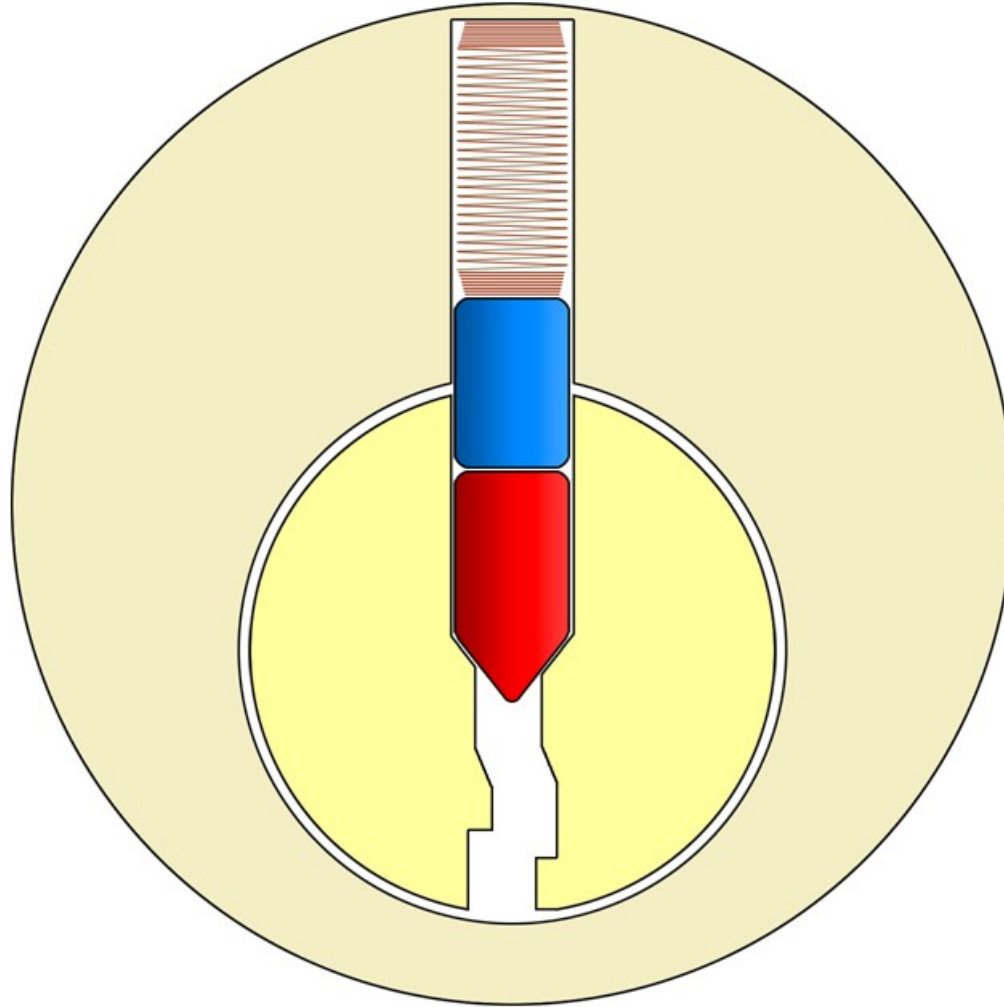
Pin Tumbler Locks



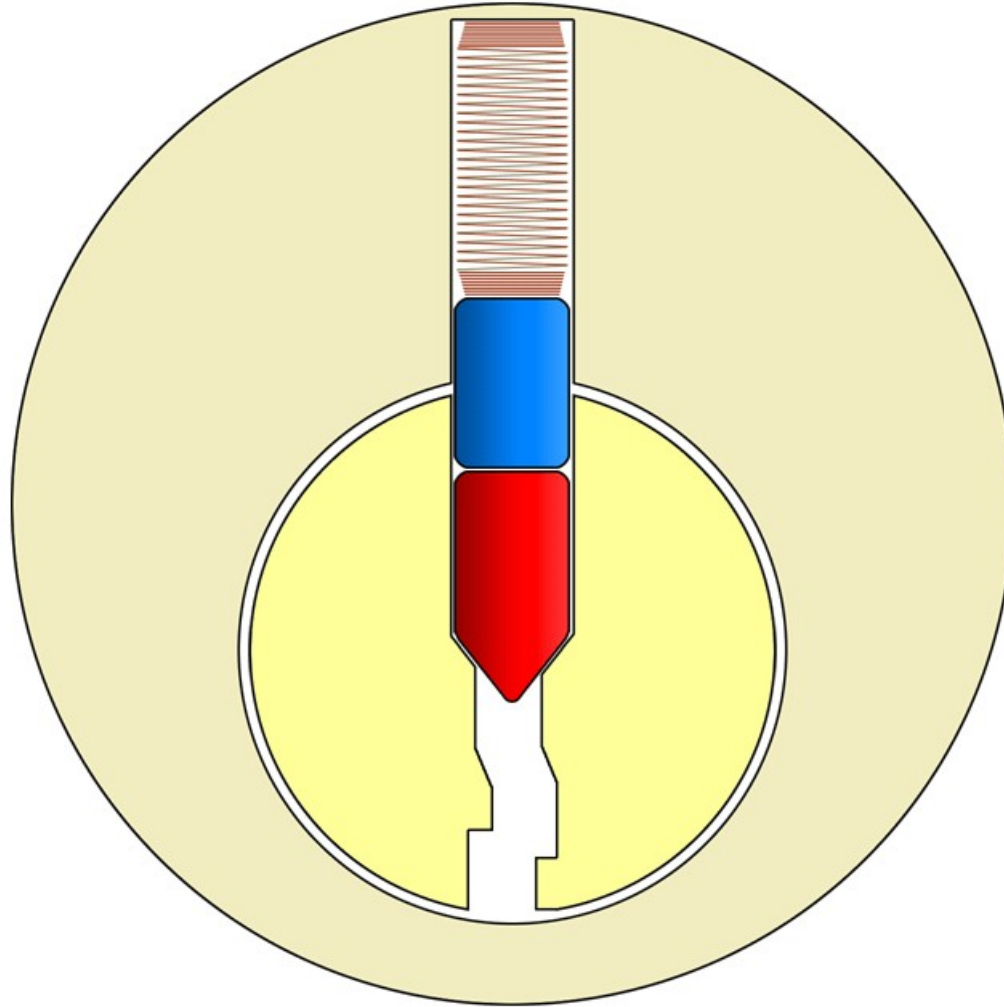
The View From Outside



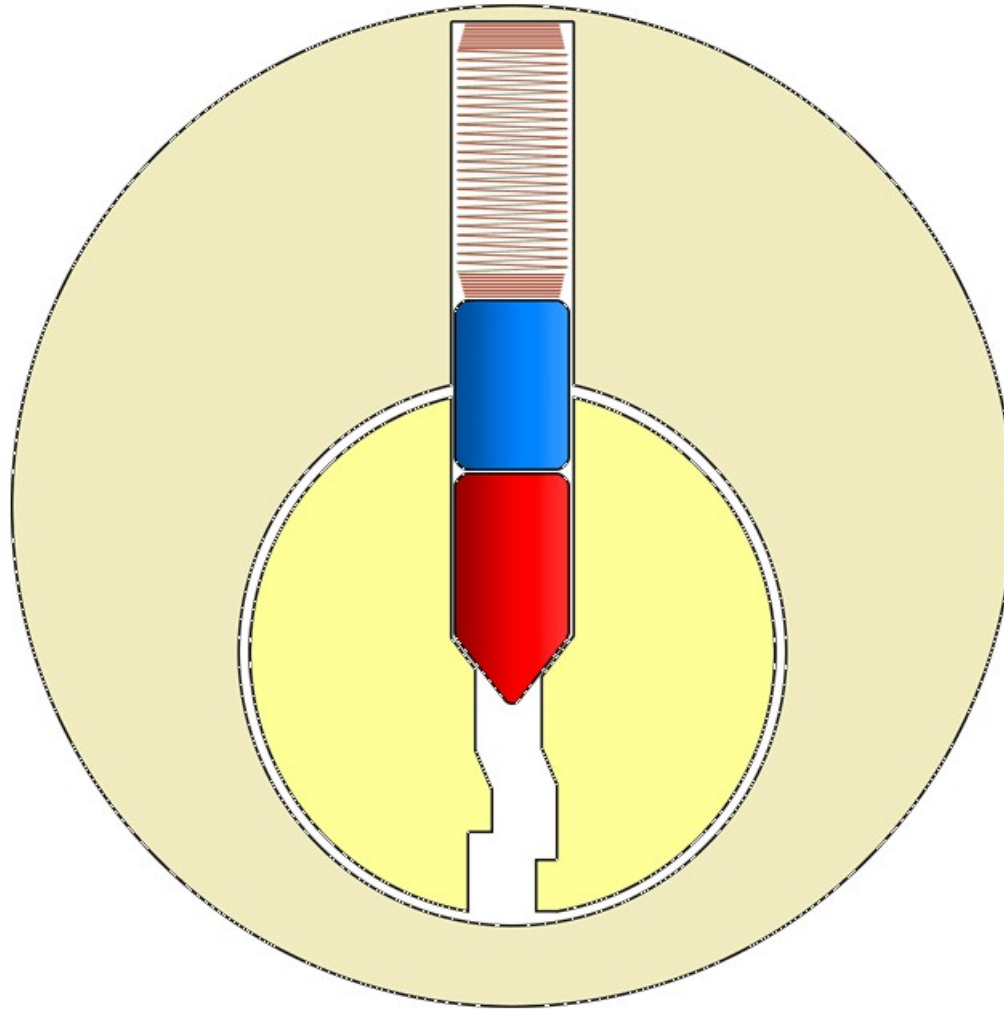
What's On The Inside



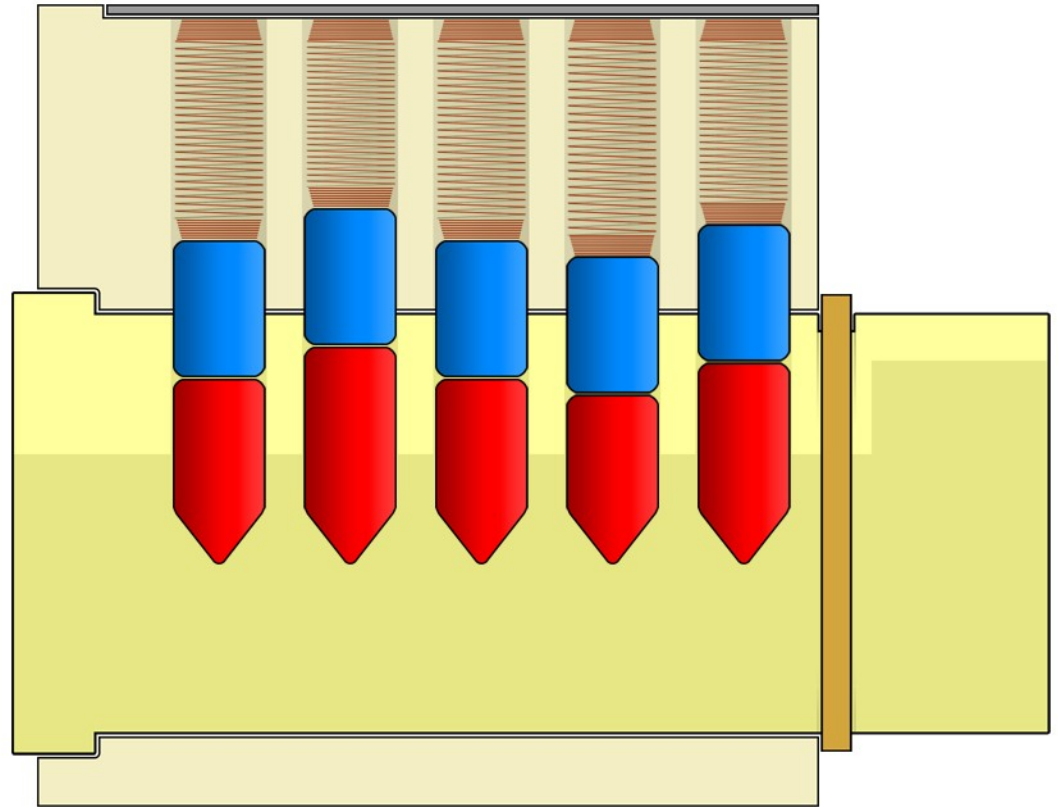
What's On The Inside



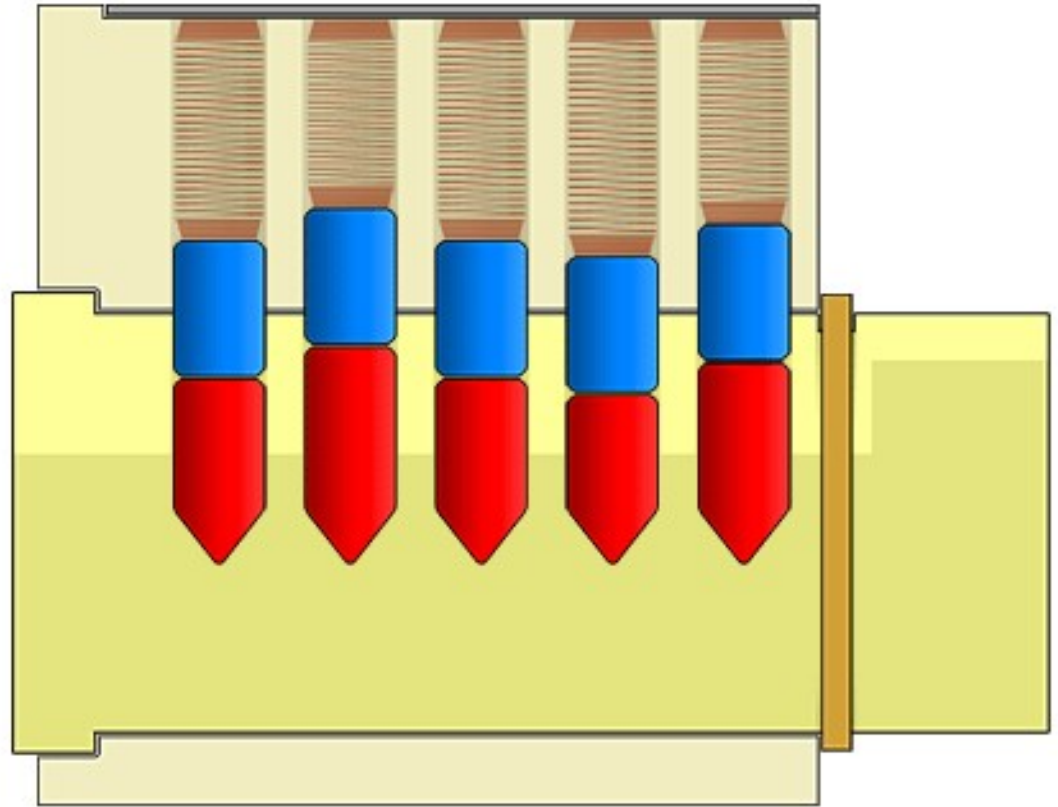
What's On The Inside



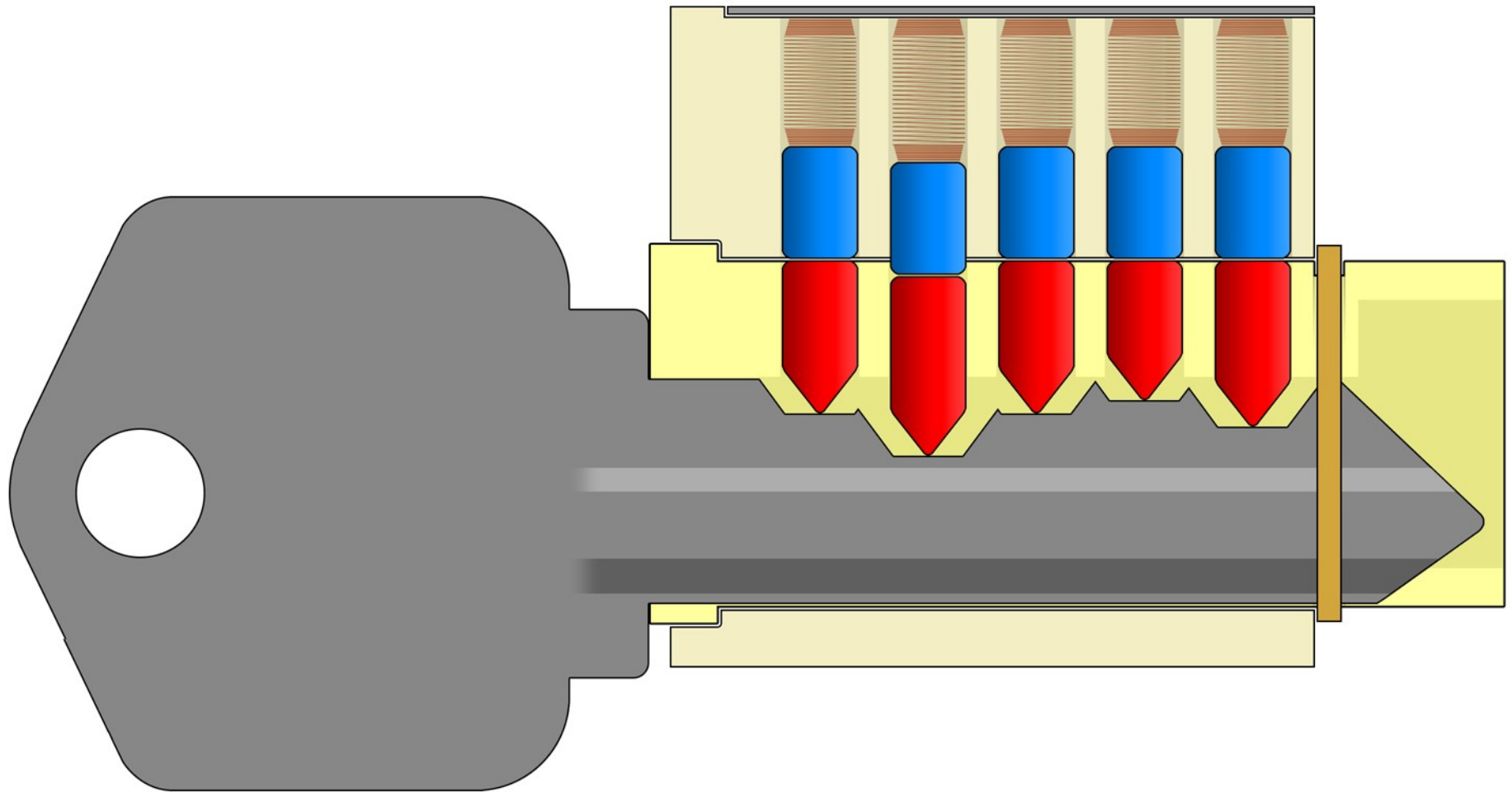
It's Not Just a Single Pin Stack



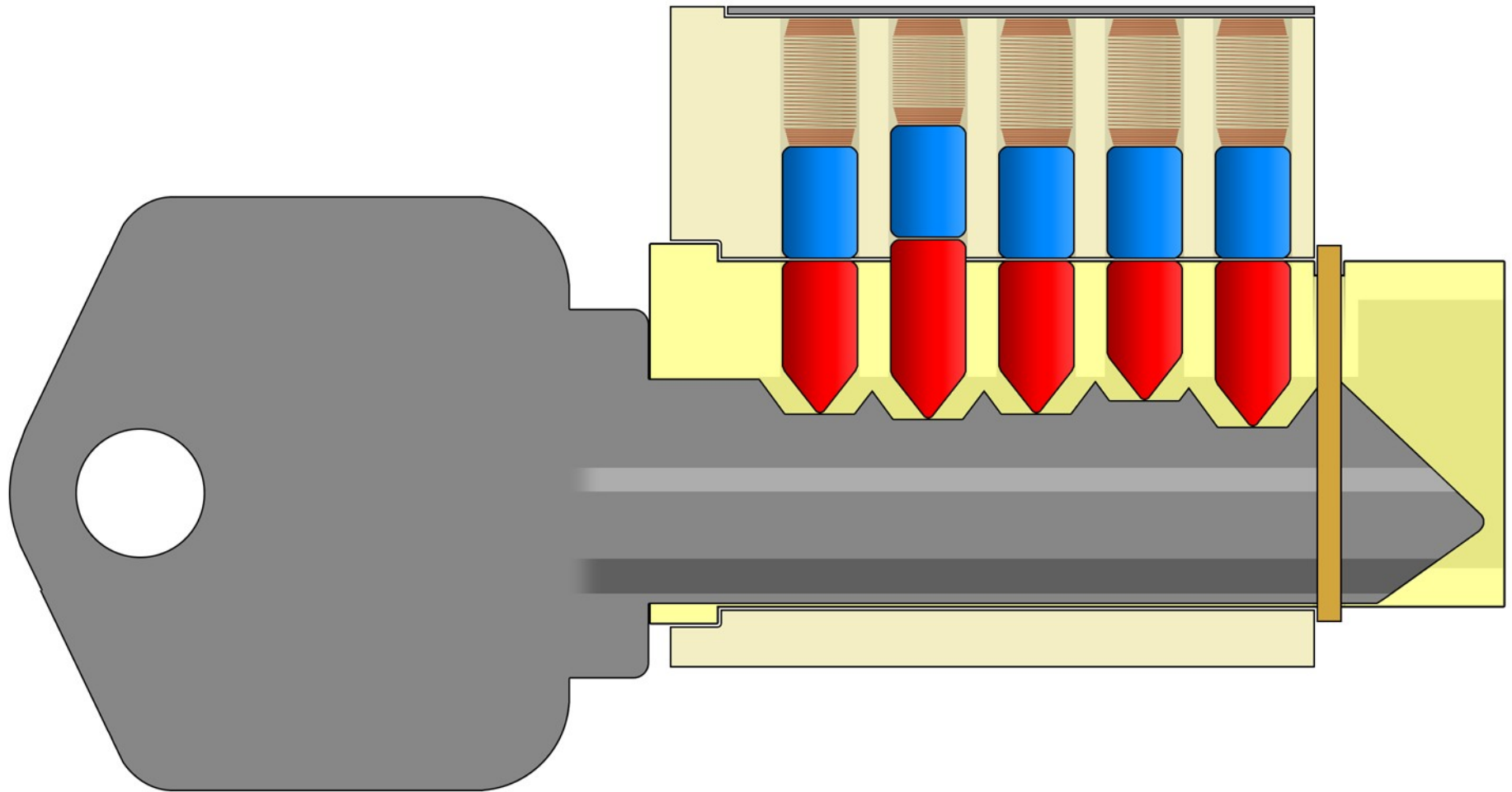
It's Not Just a Single Pin Stack



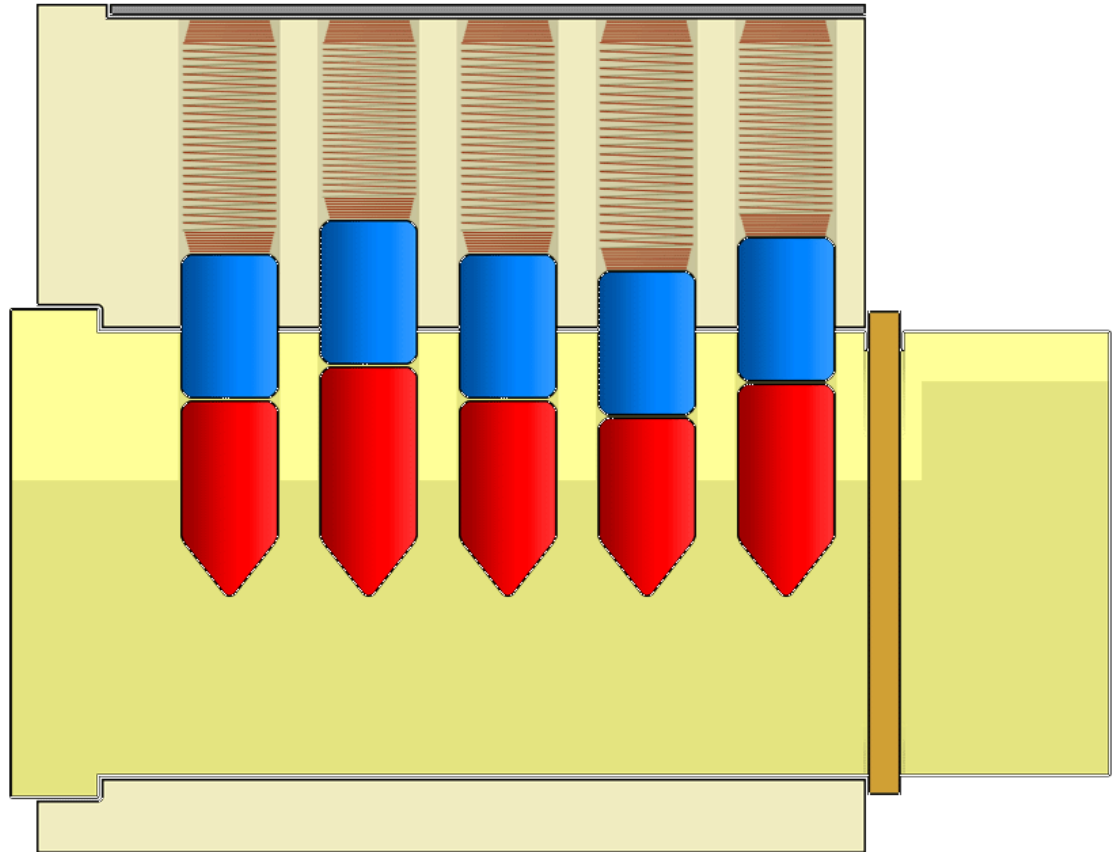
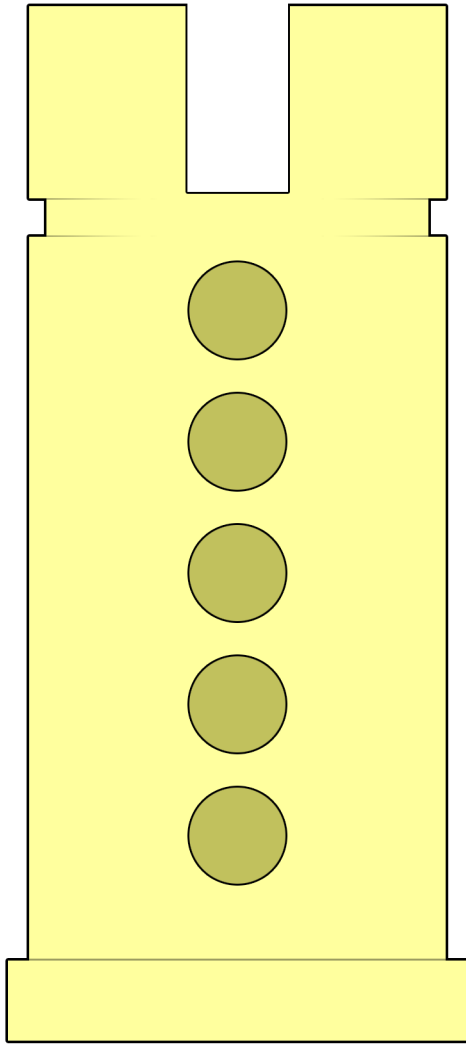
The Key Has To Be Just Right



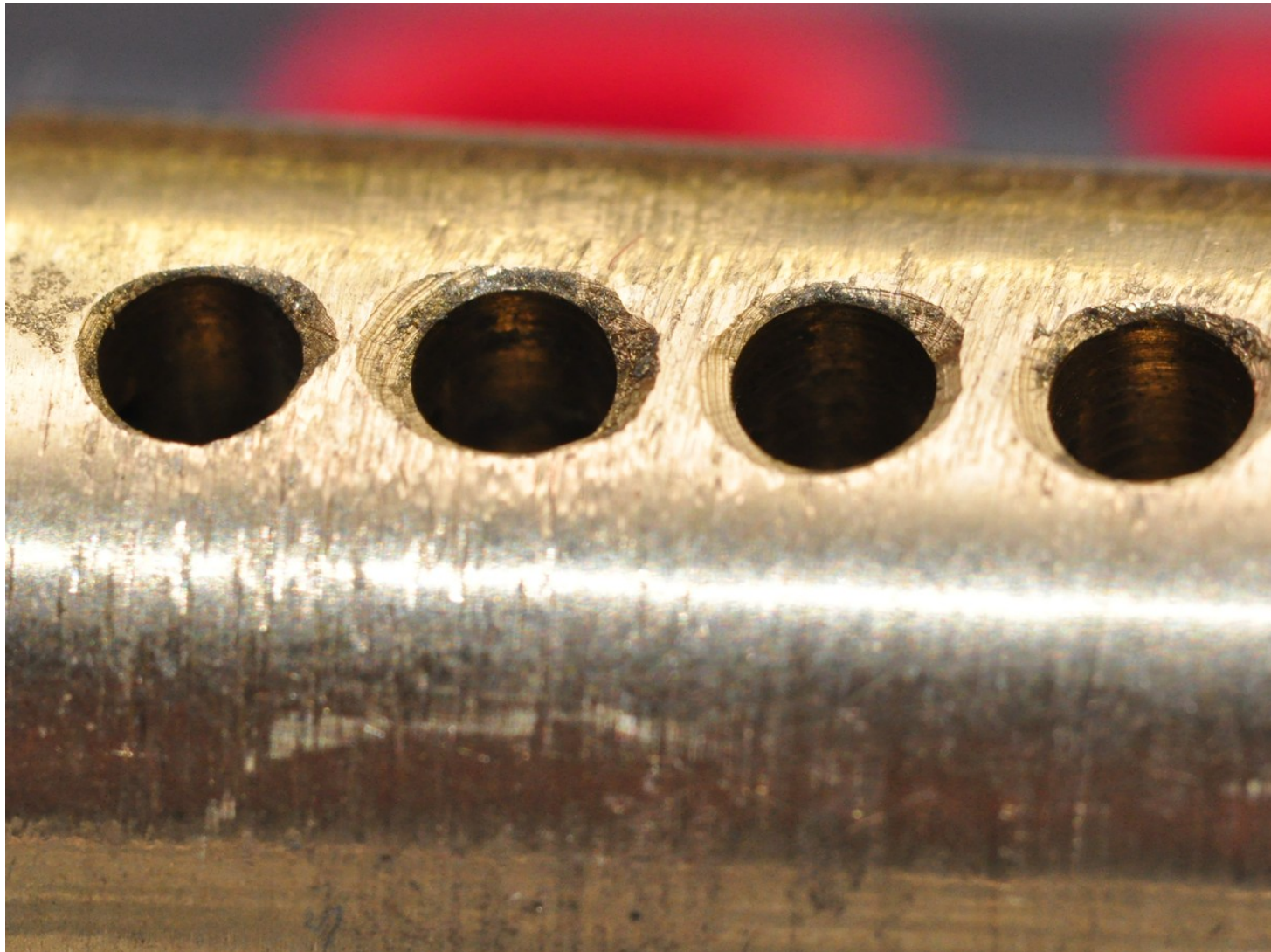
The Key Has To Be Just Right



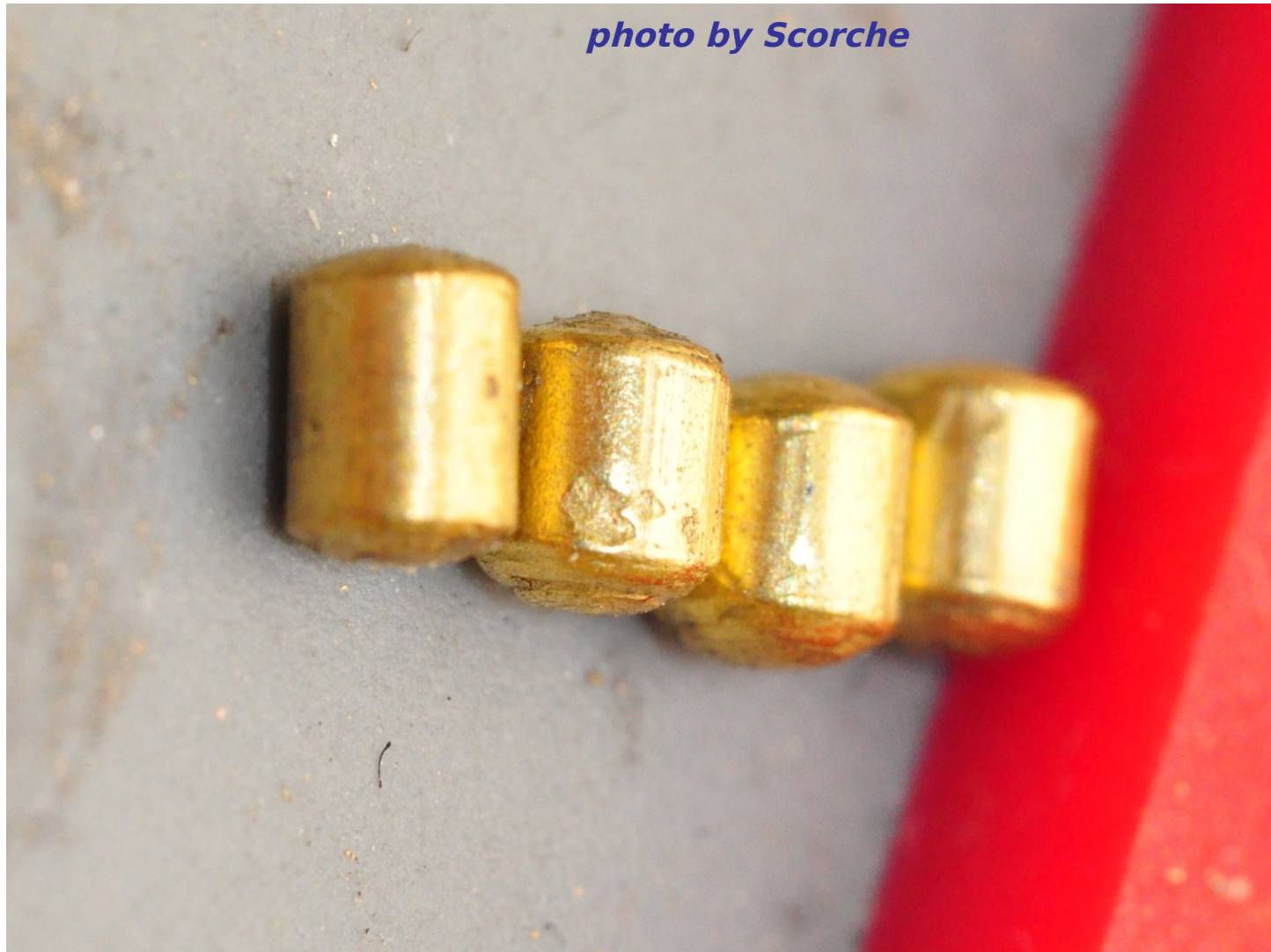
In An Ideal World ...



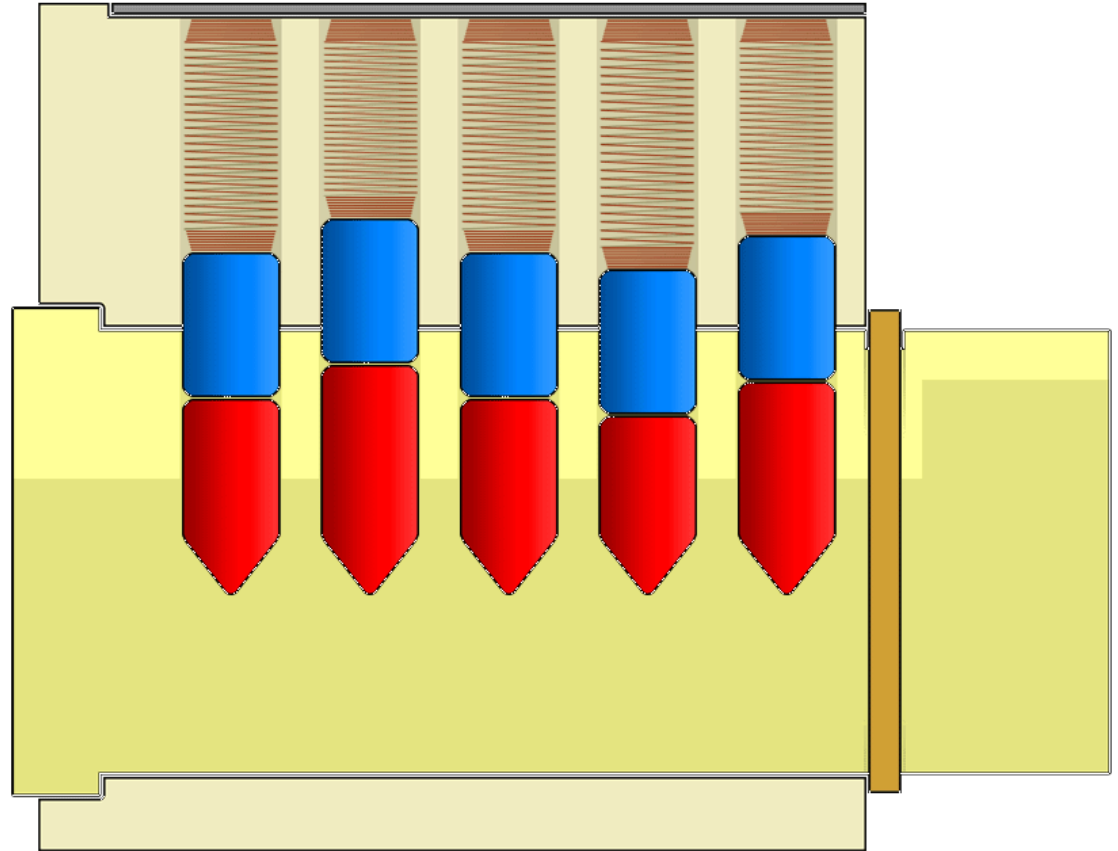
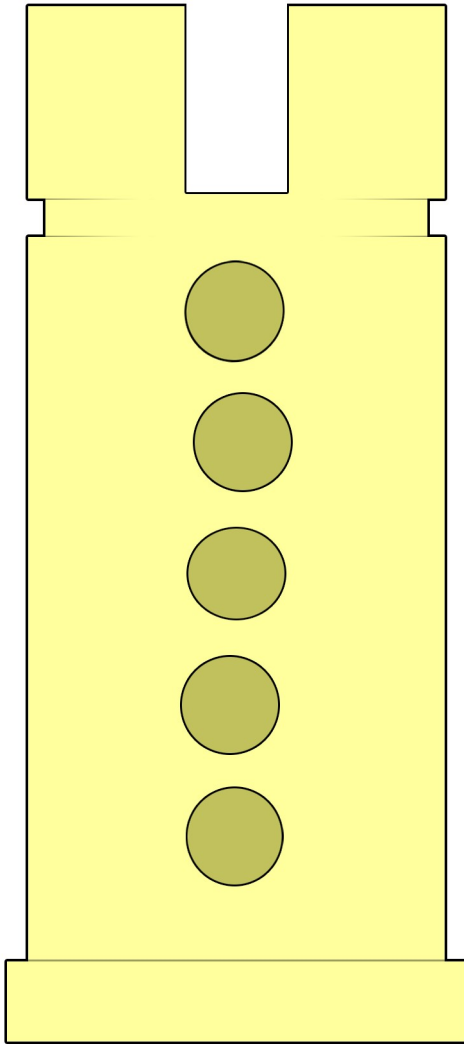
In The Real World ...



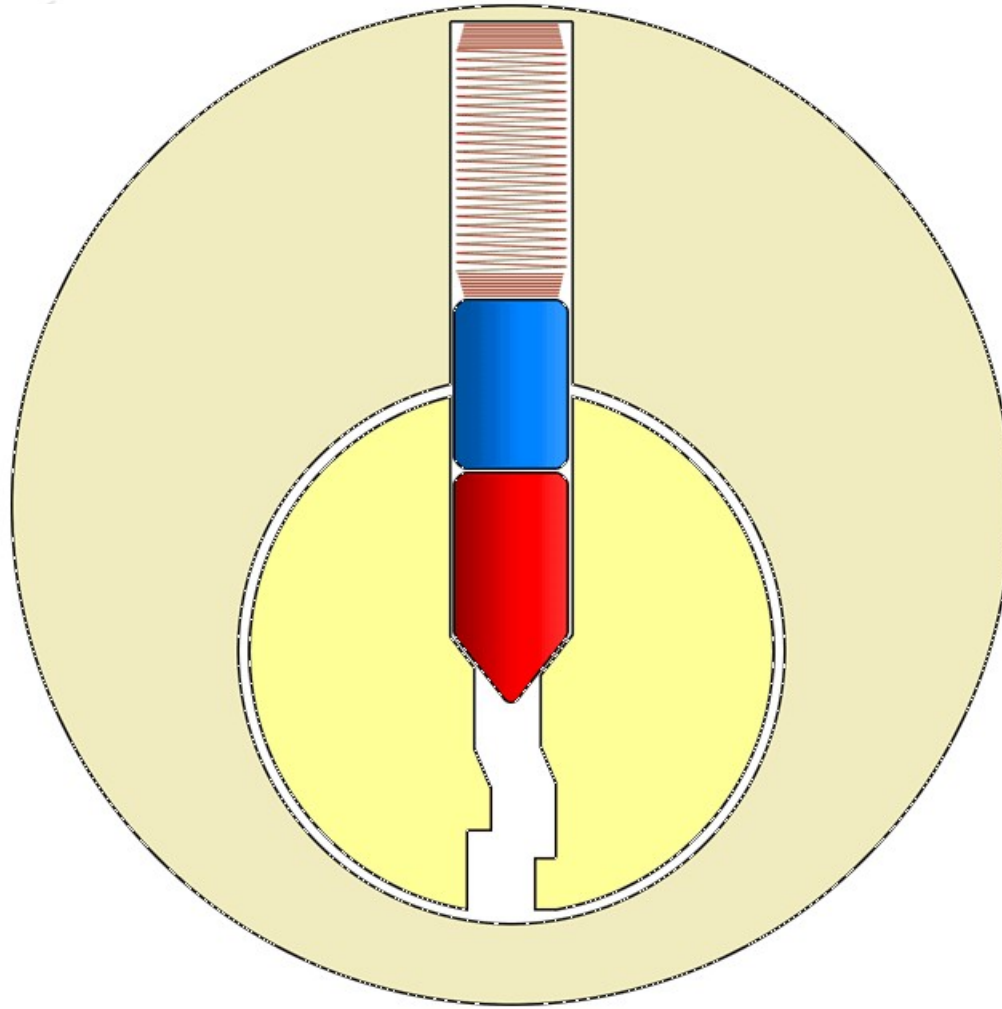
In The Real World ...



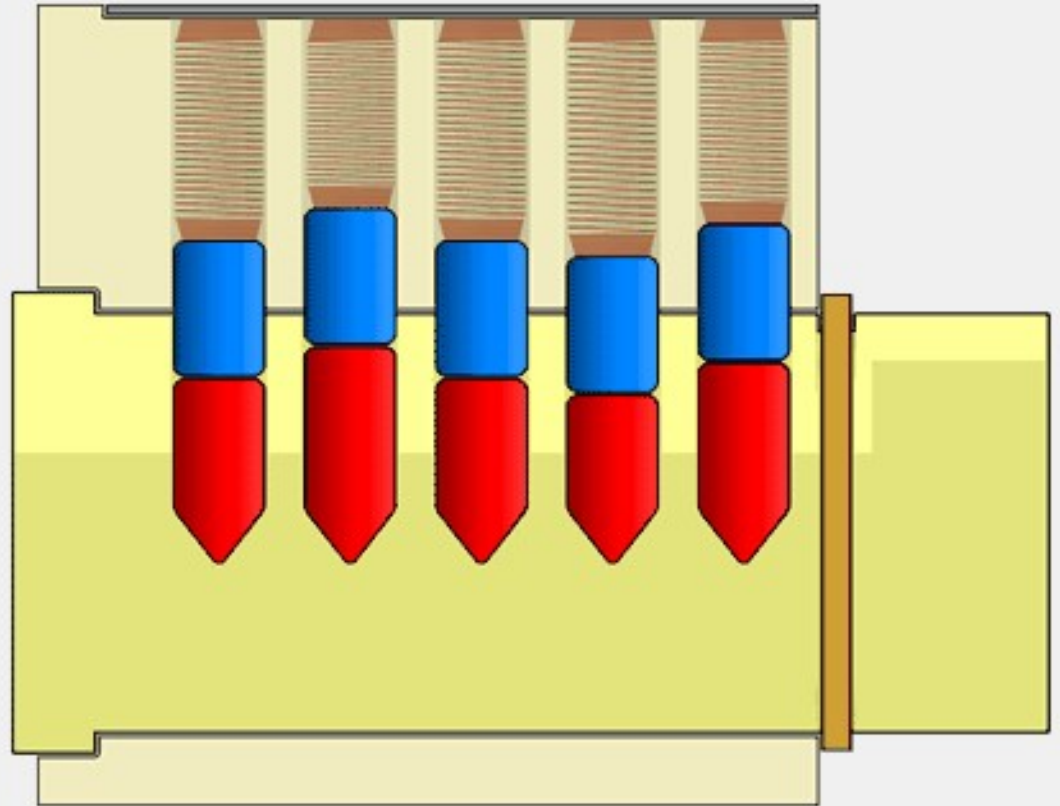
In The Real World ...



Setting a Pin



Setting the Pins

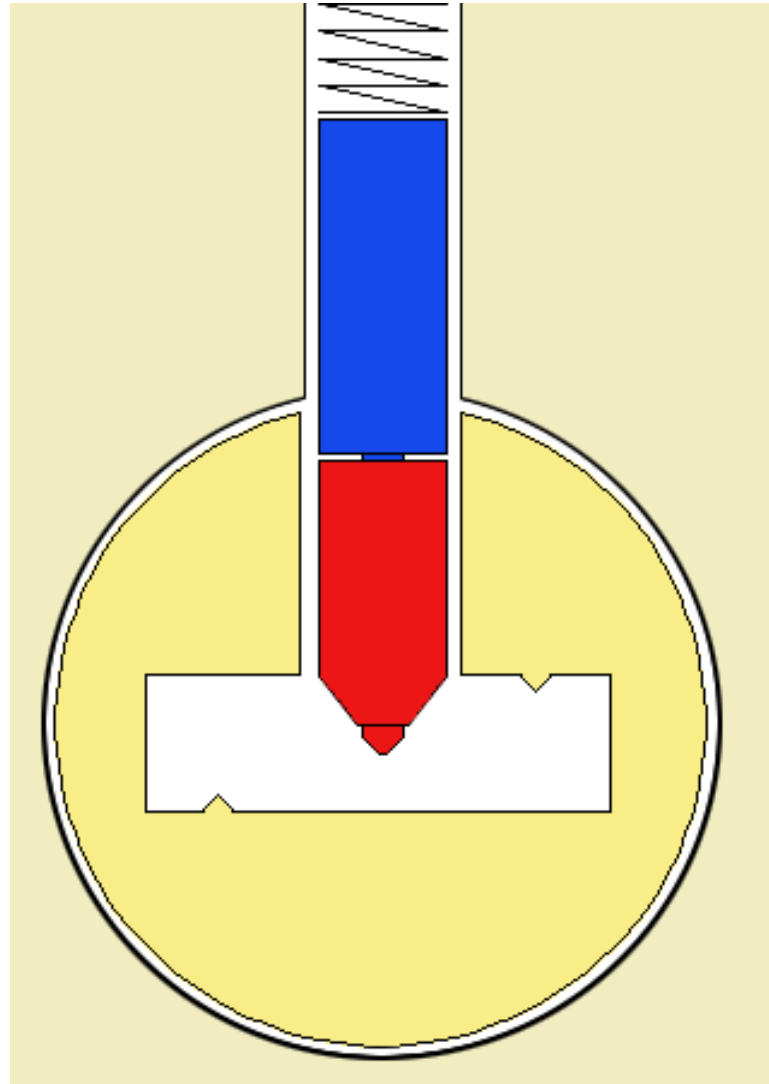


So How Do Some Manufacturers Attempt To Make Locks Better?

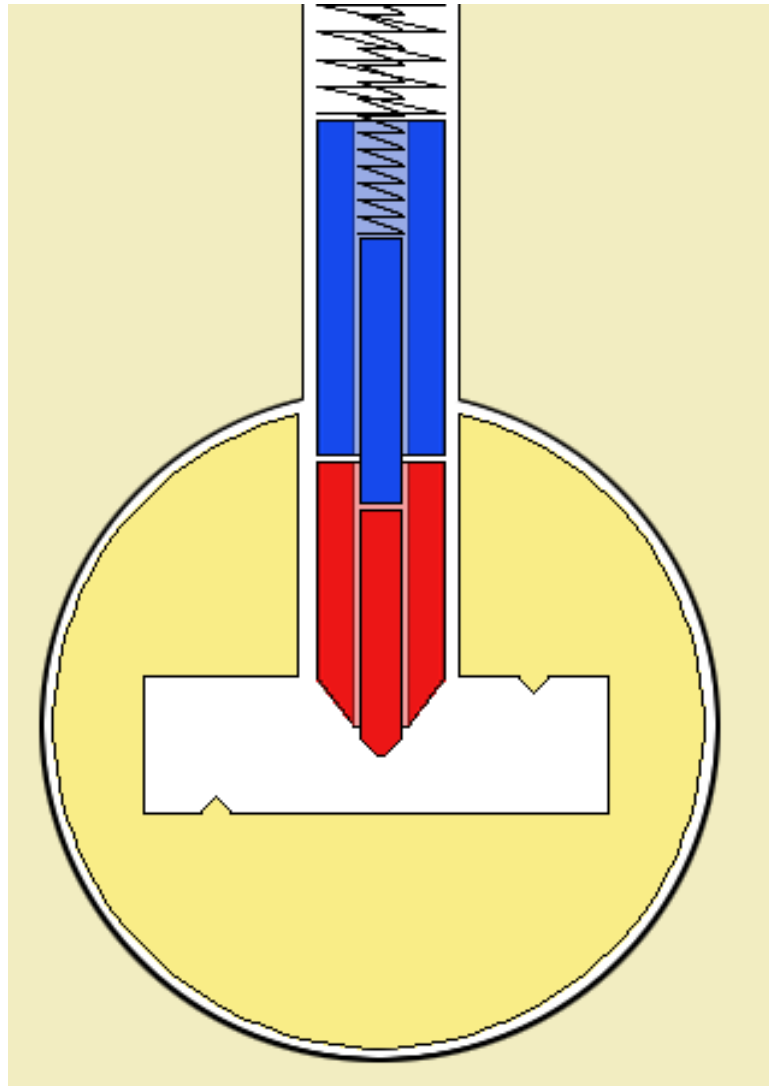
Mul-T-Lock



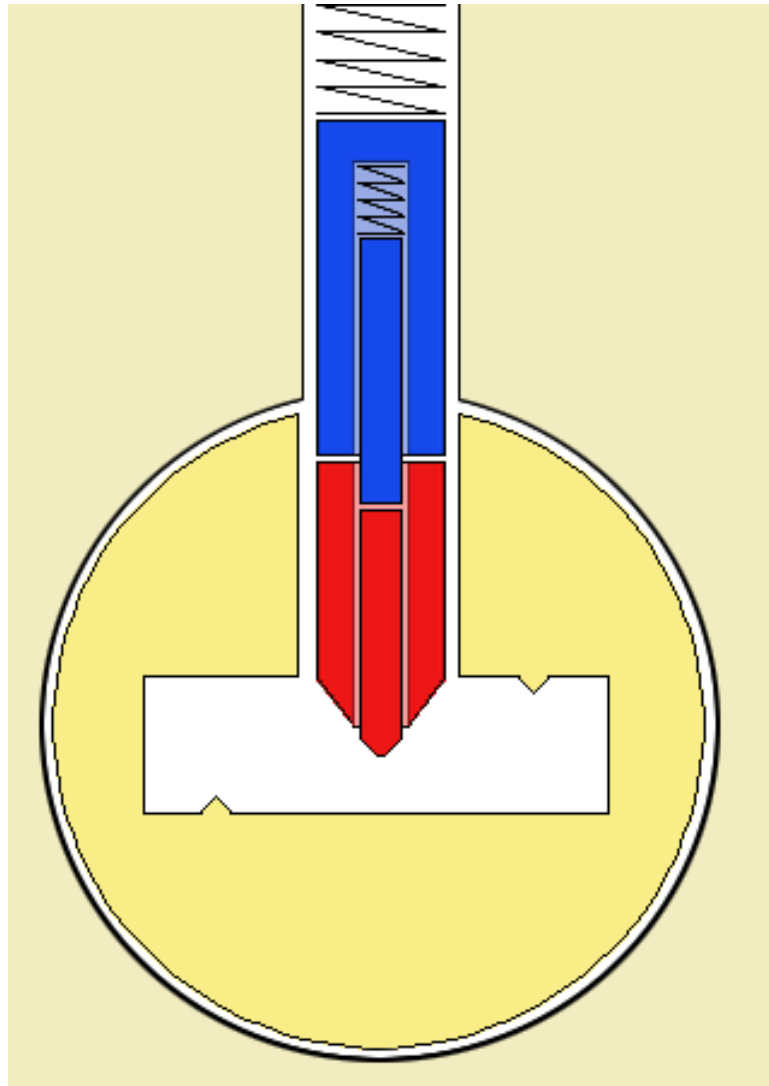
Mul-T-Lock



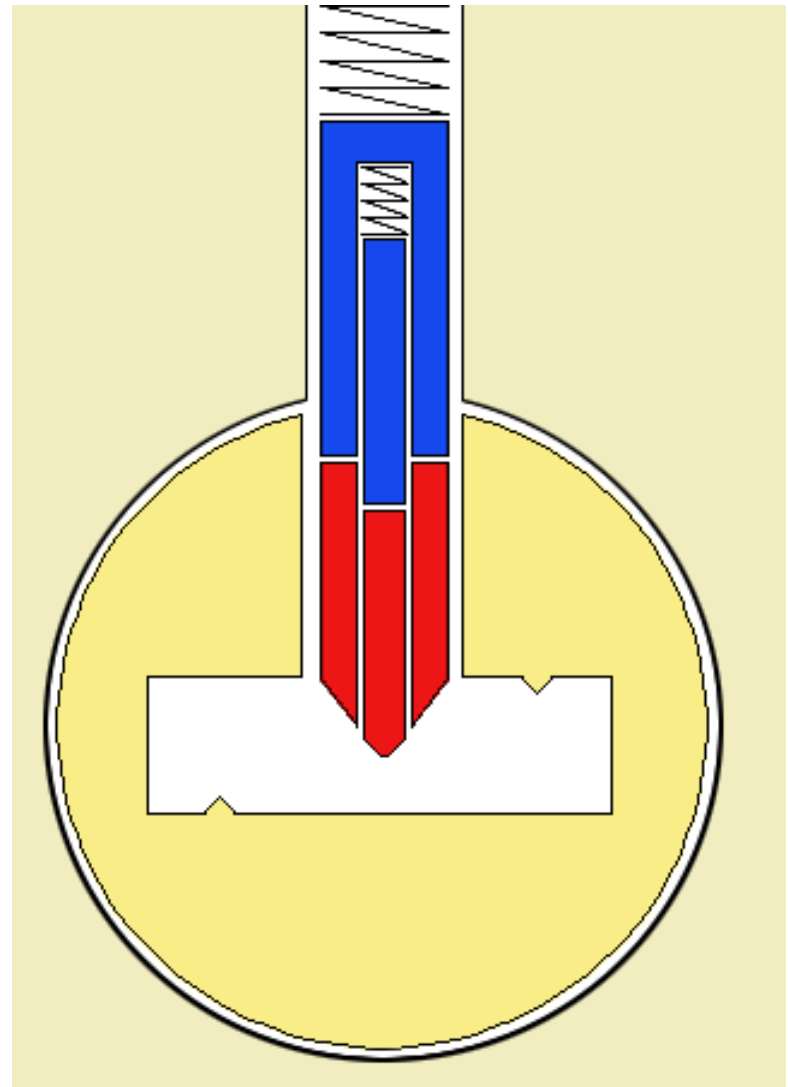
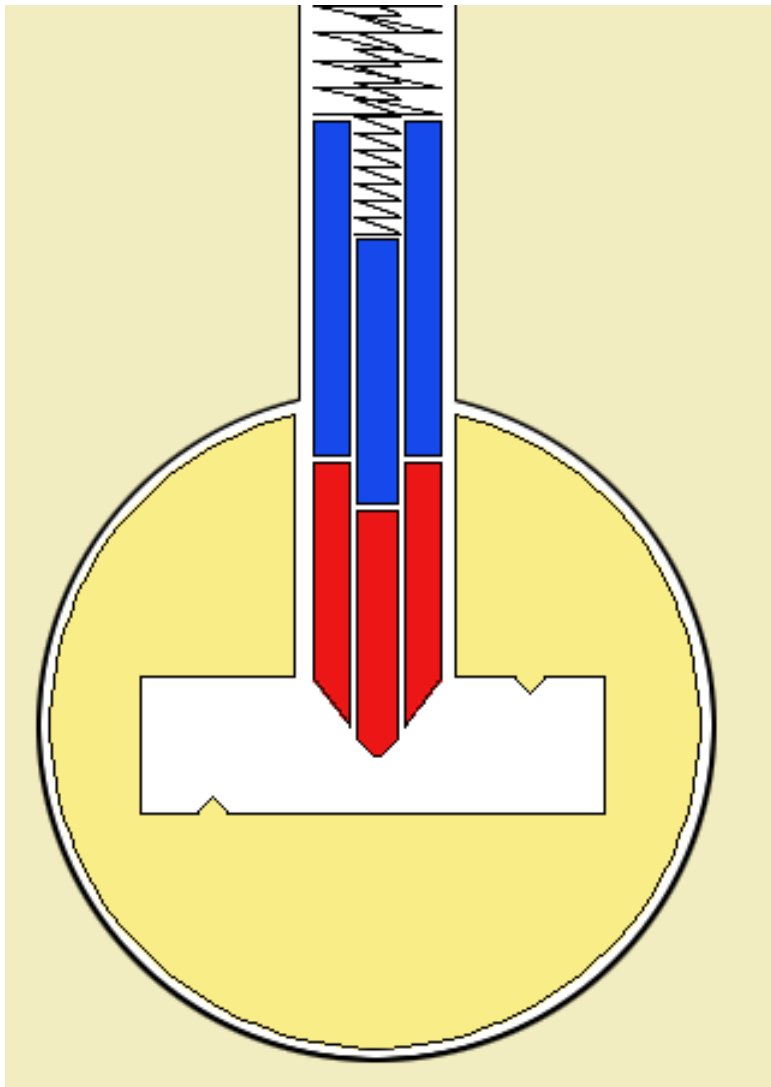
Mul-T-Lock



Mul-T-Lock



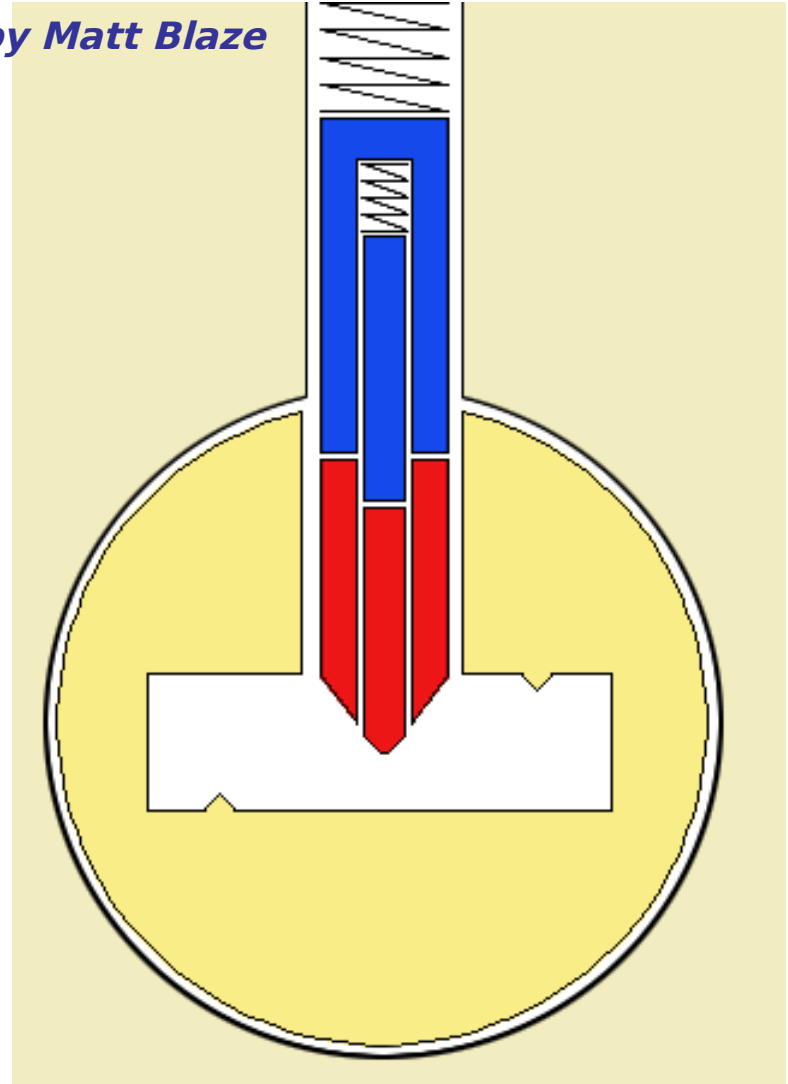
Mul-T-Lock



Mul-T-Lock

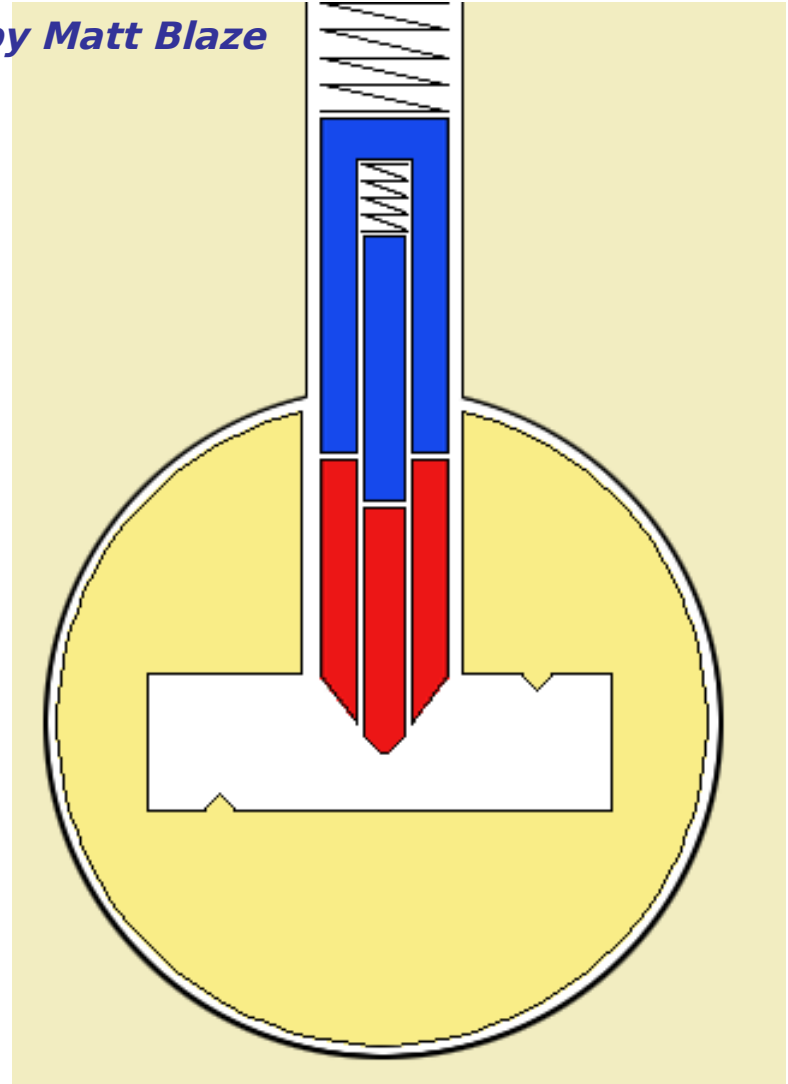


Photo by Matt Blaze

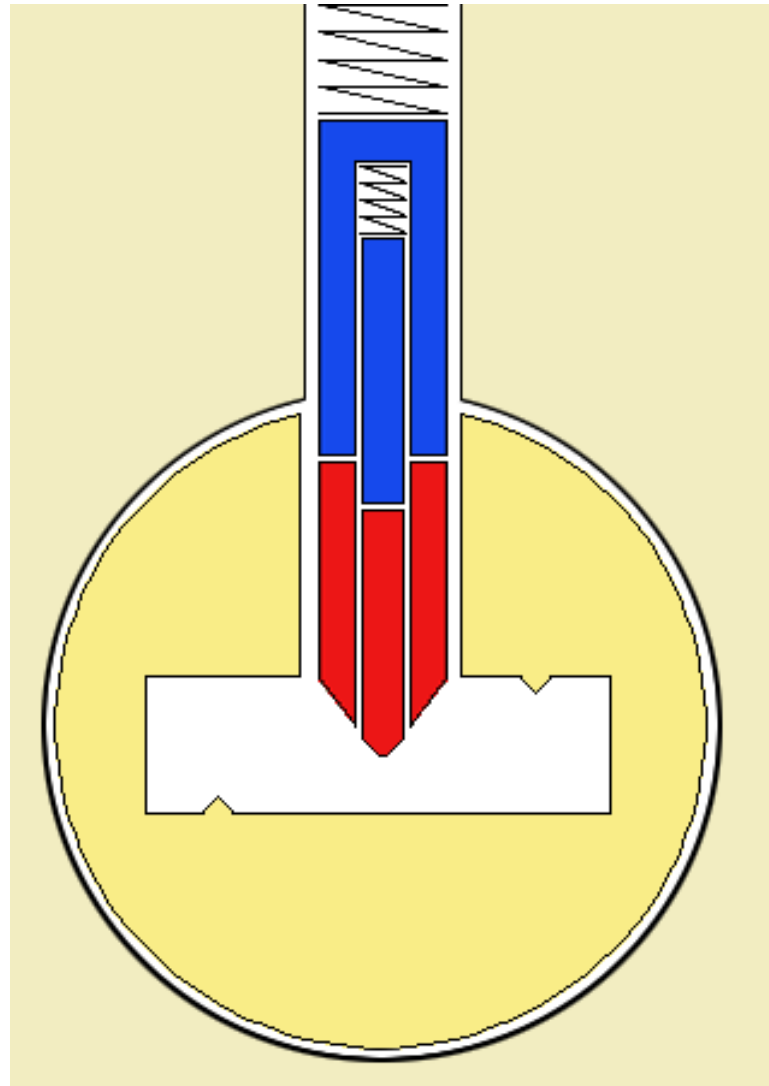


Mul-T-Lock

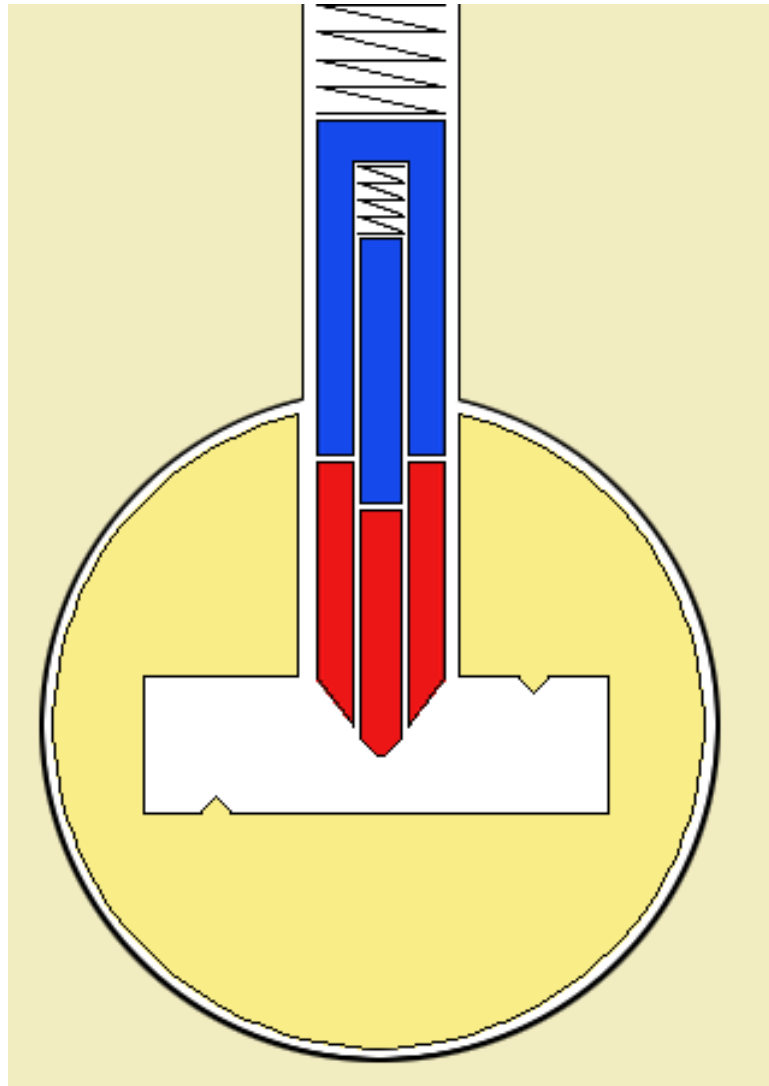
photo by Matt Blaze



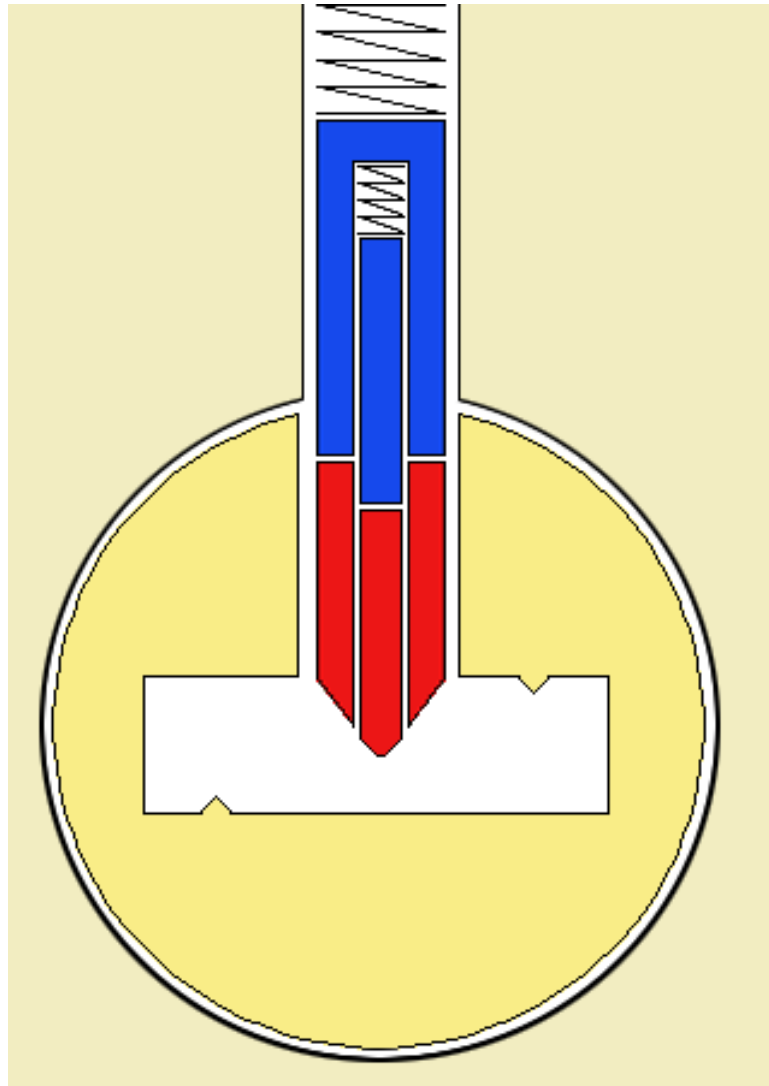
Mul-T-Lock



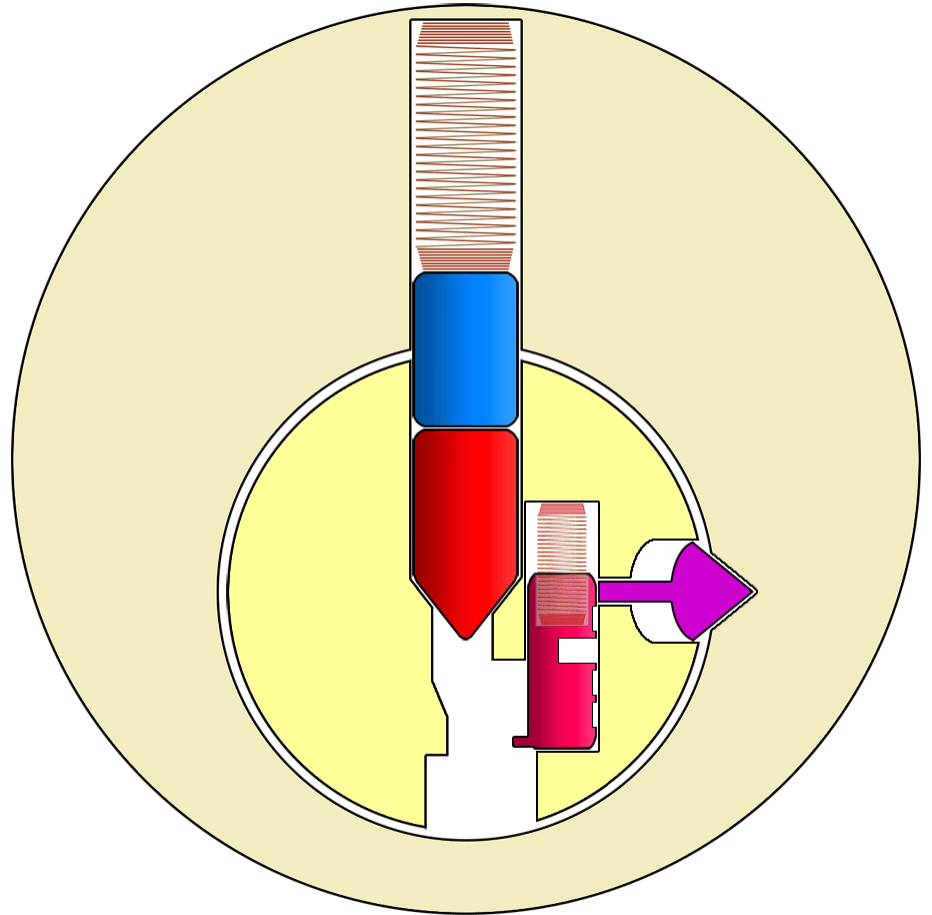
Mul-T-Lock



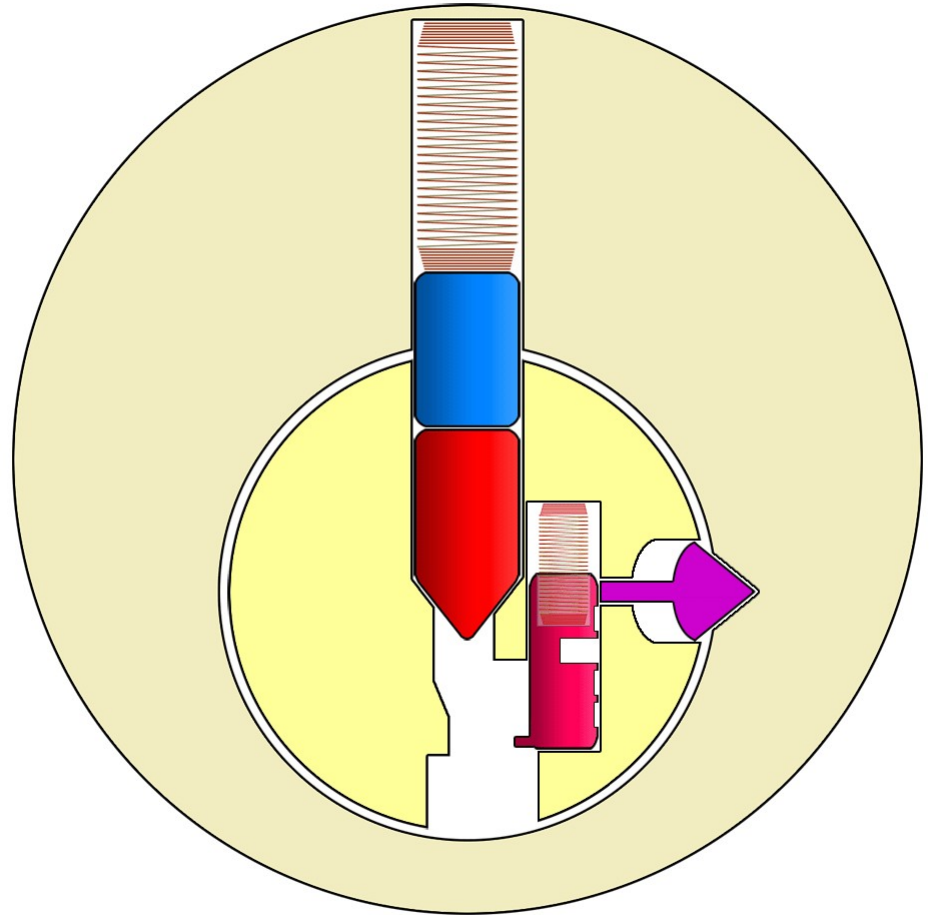
Mul-T-Lock



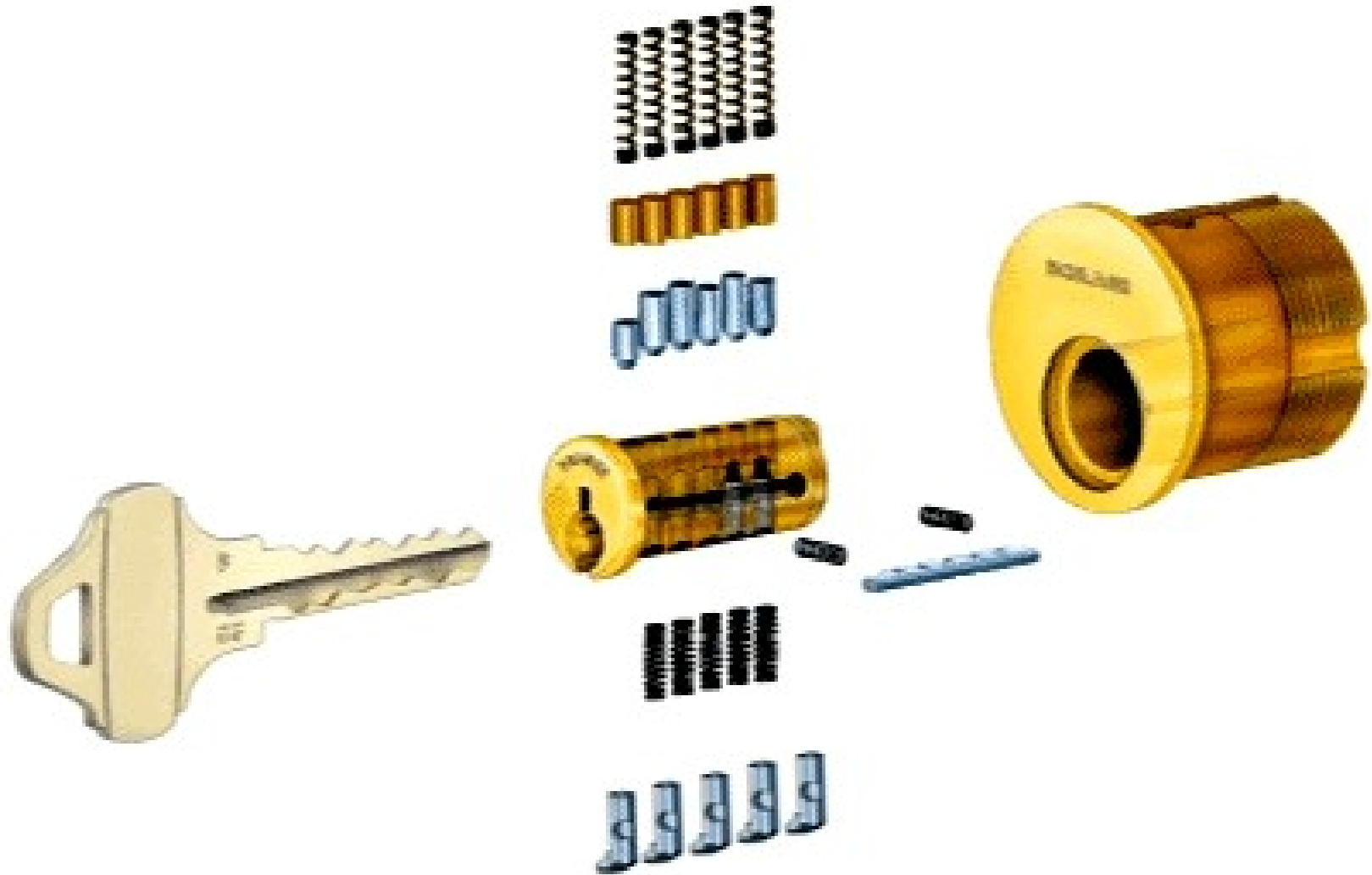
Side Bars



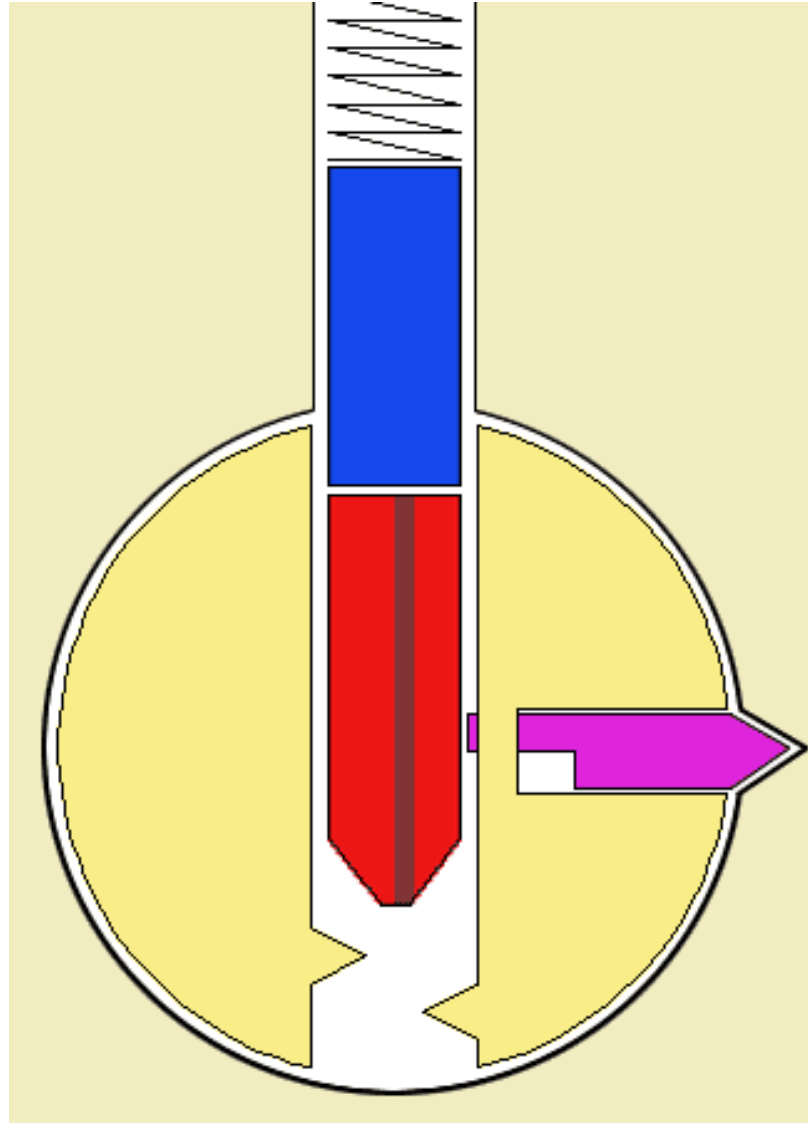
Side Bars



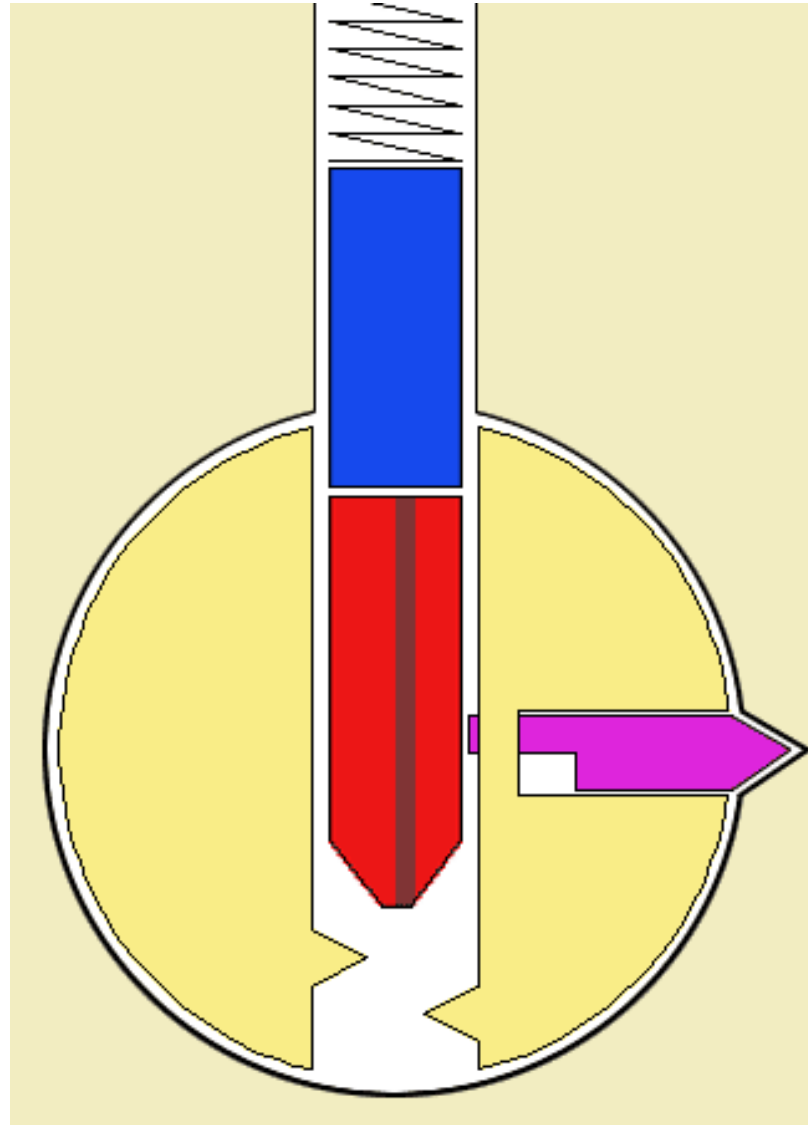
Schlage Primus



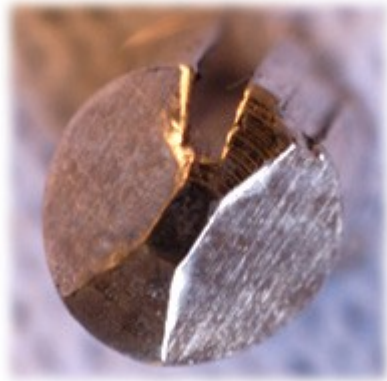
Medeco



Medeco



Medeco

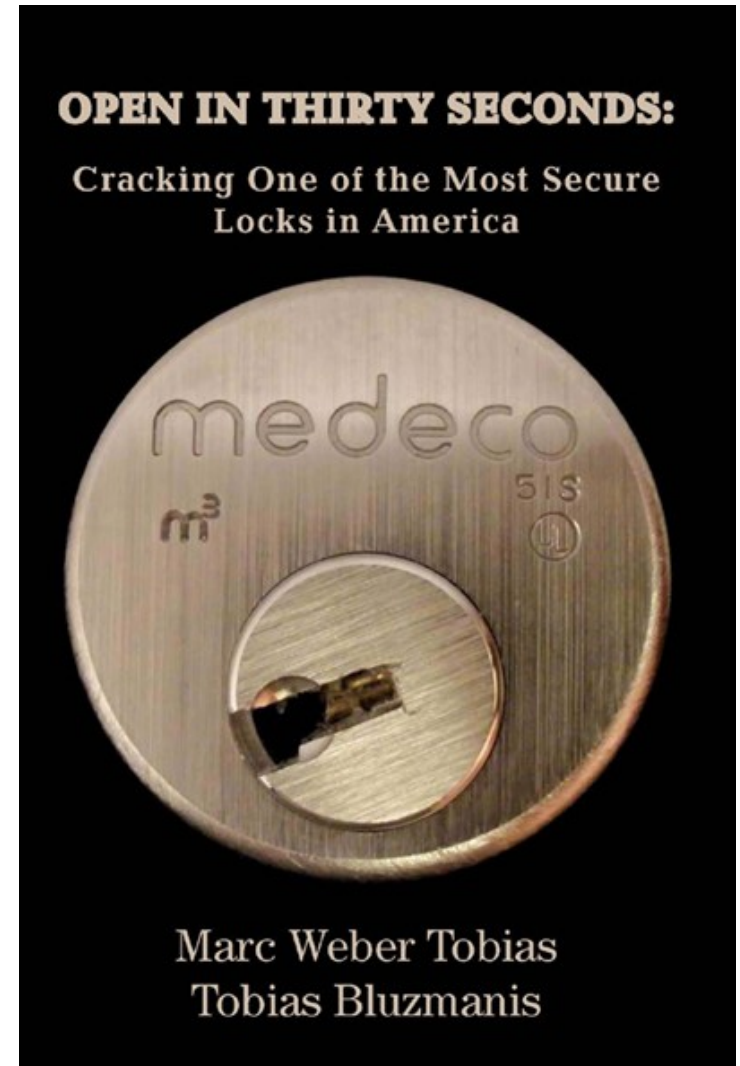
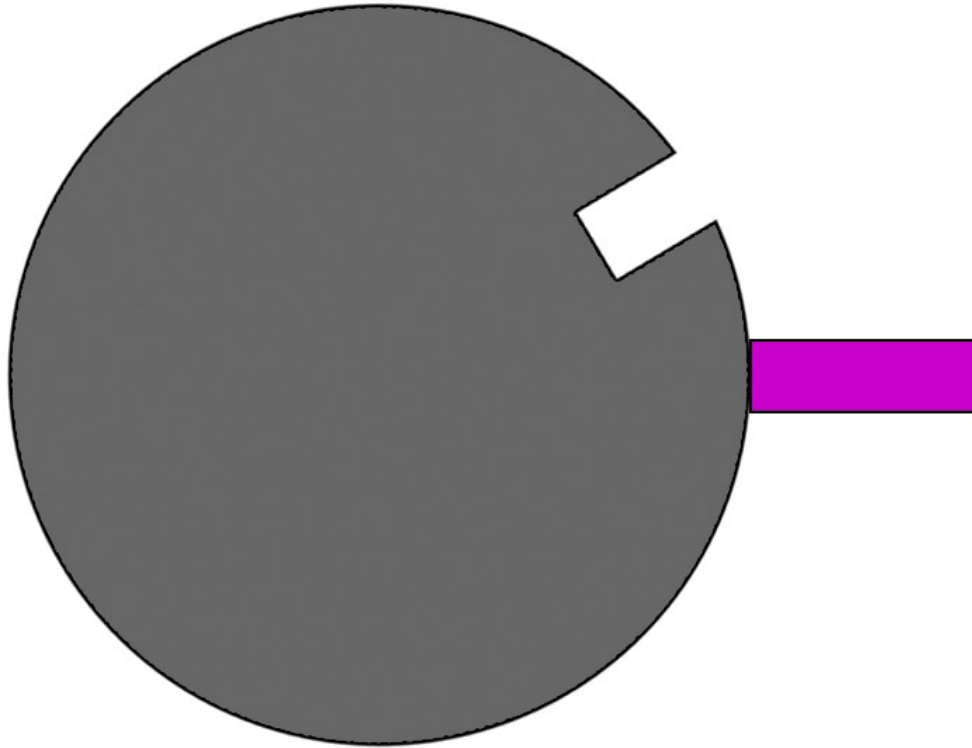


**Medeco plug exposed, key pins
rotating to align sidebar cuts**

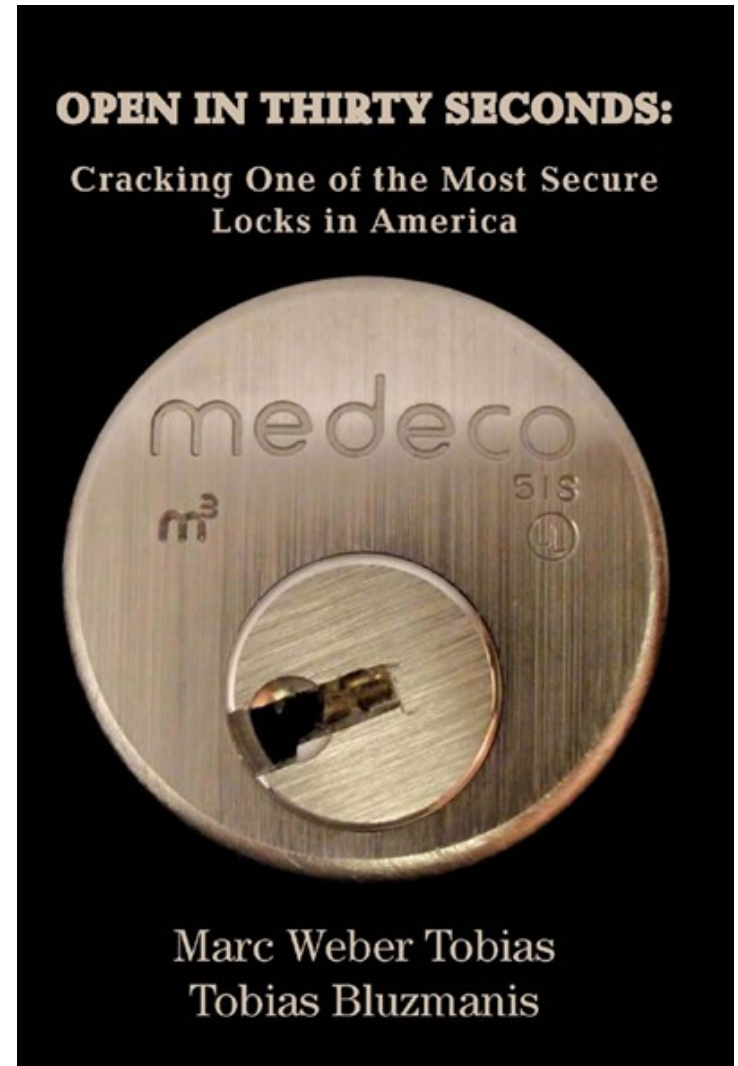
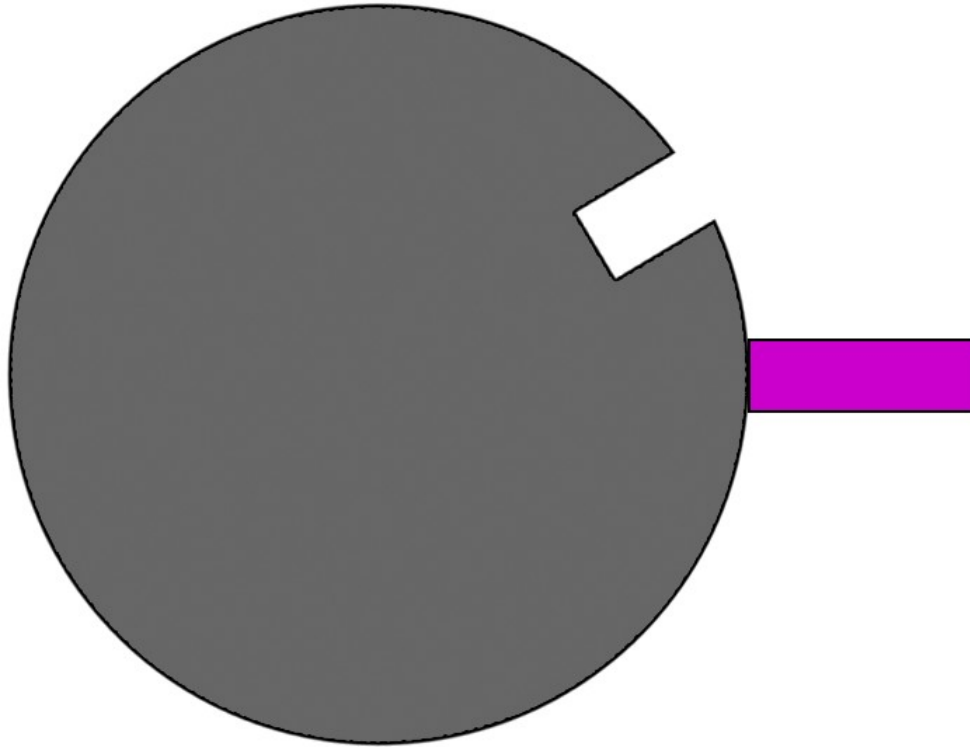

Top View


Side View

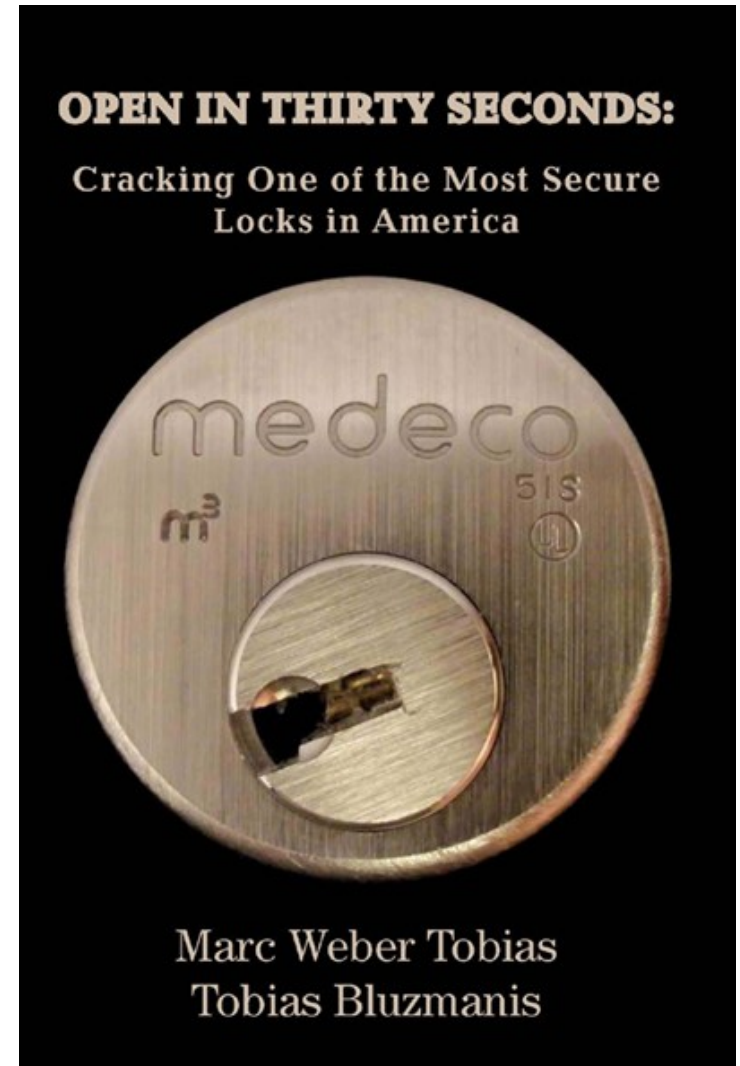
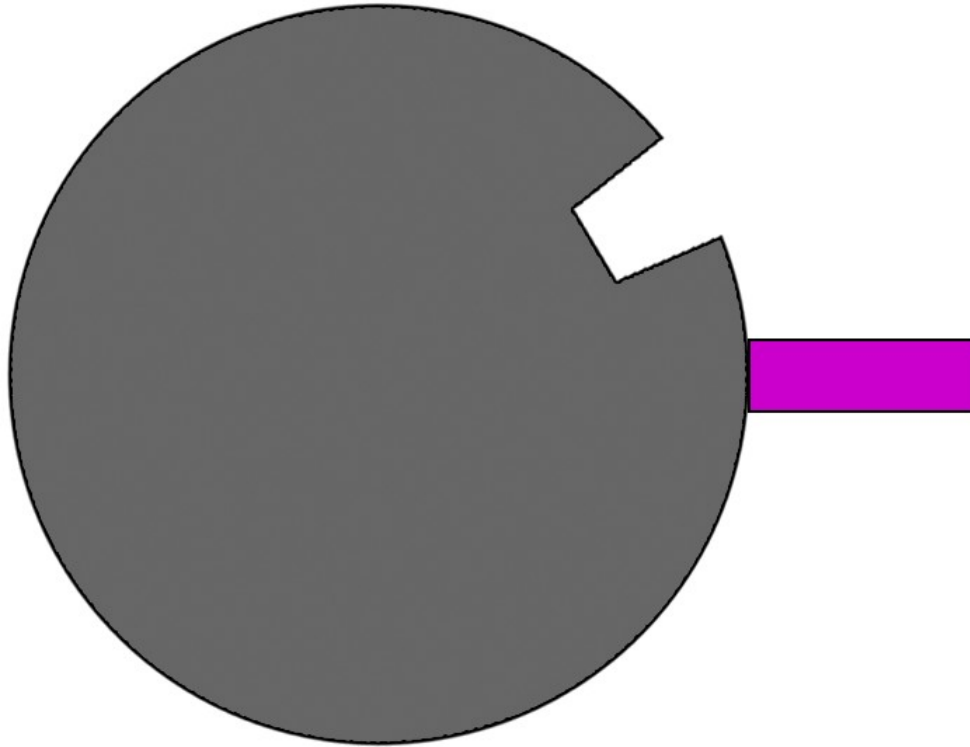
Medeco



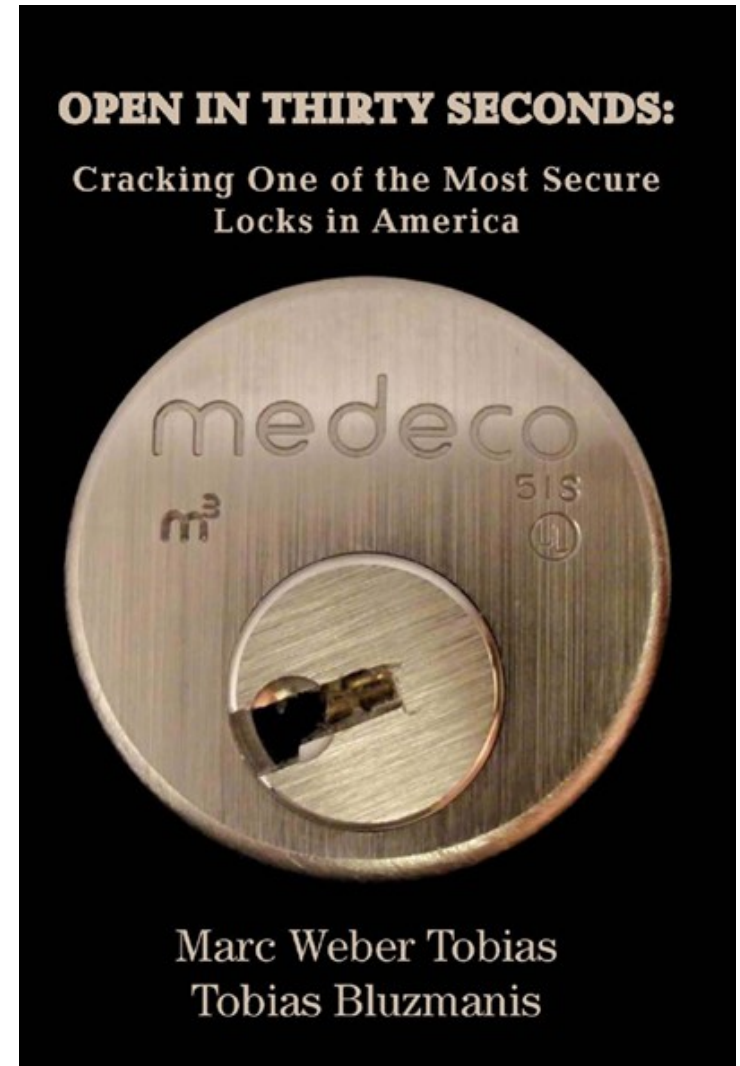
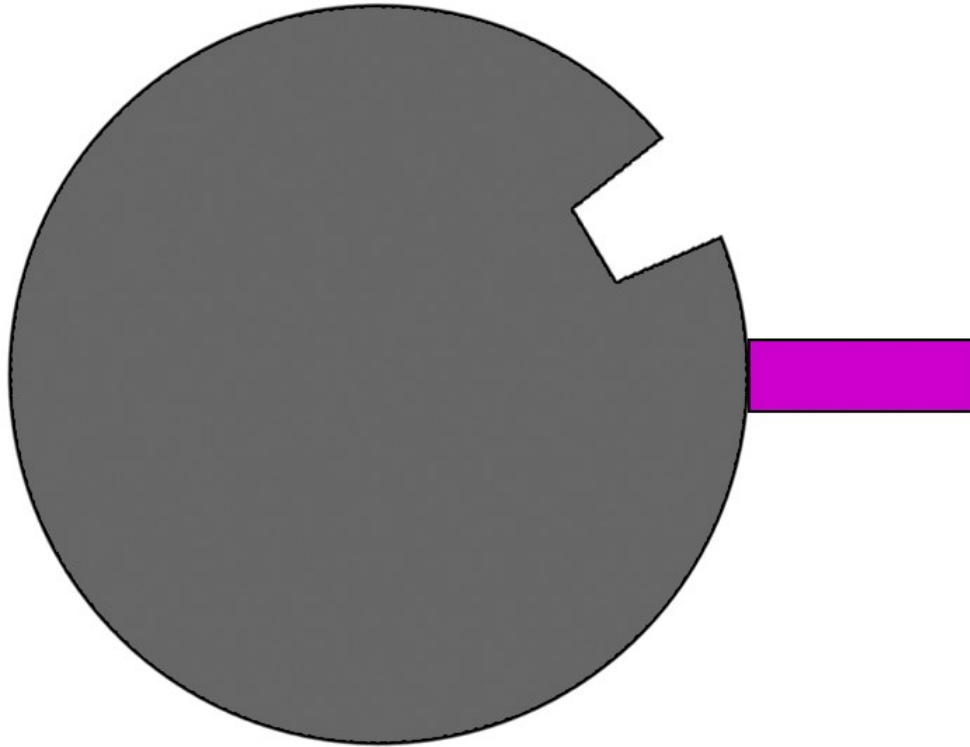
Medeco



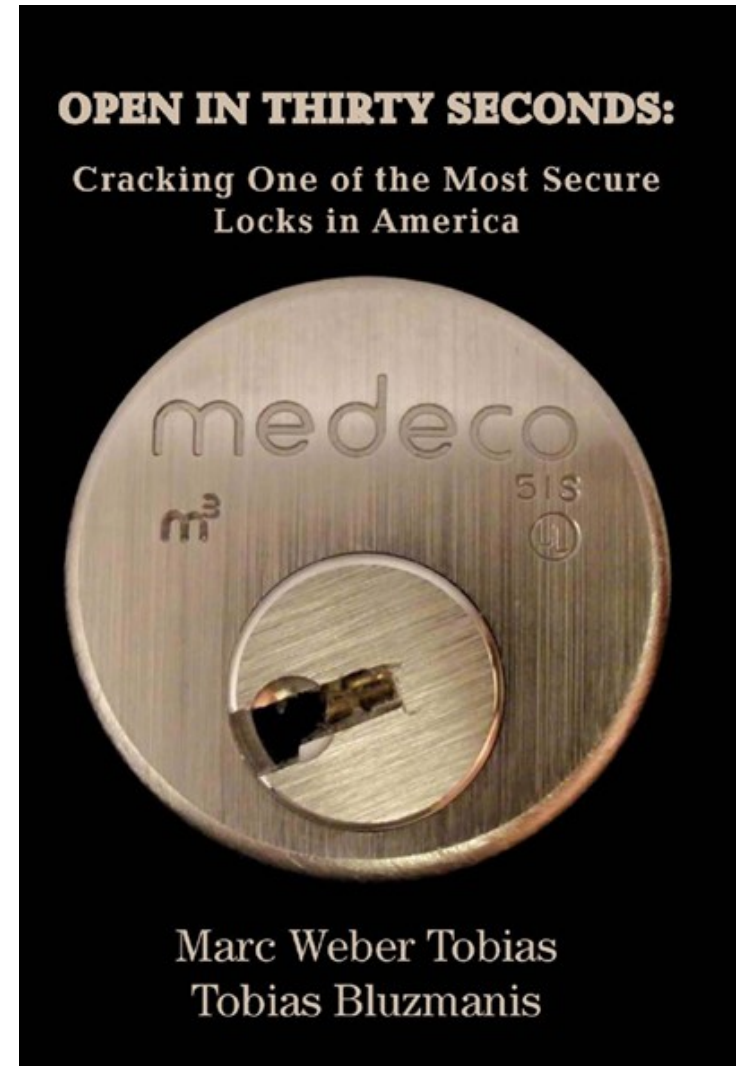
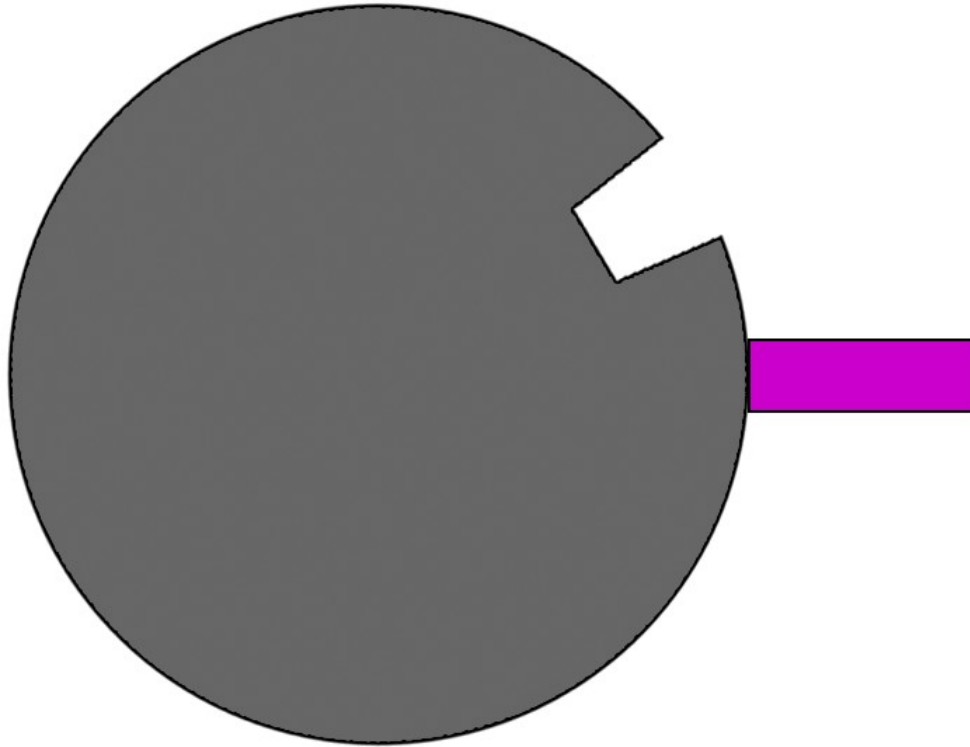
Medeco



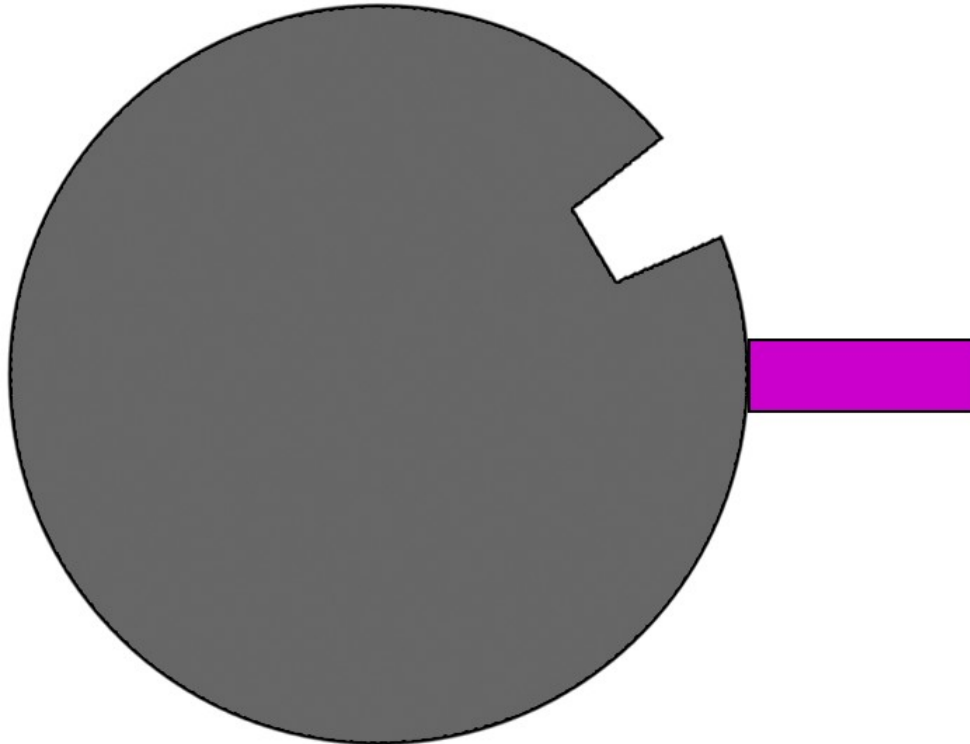
Medeco



Medeco



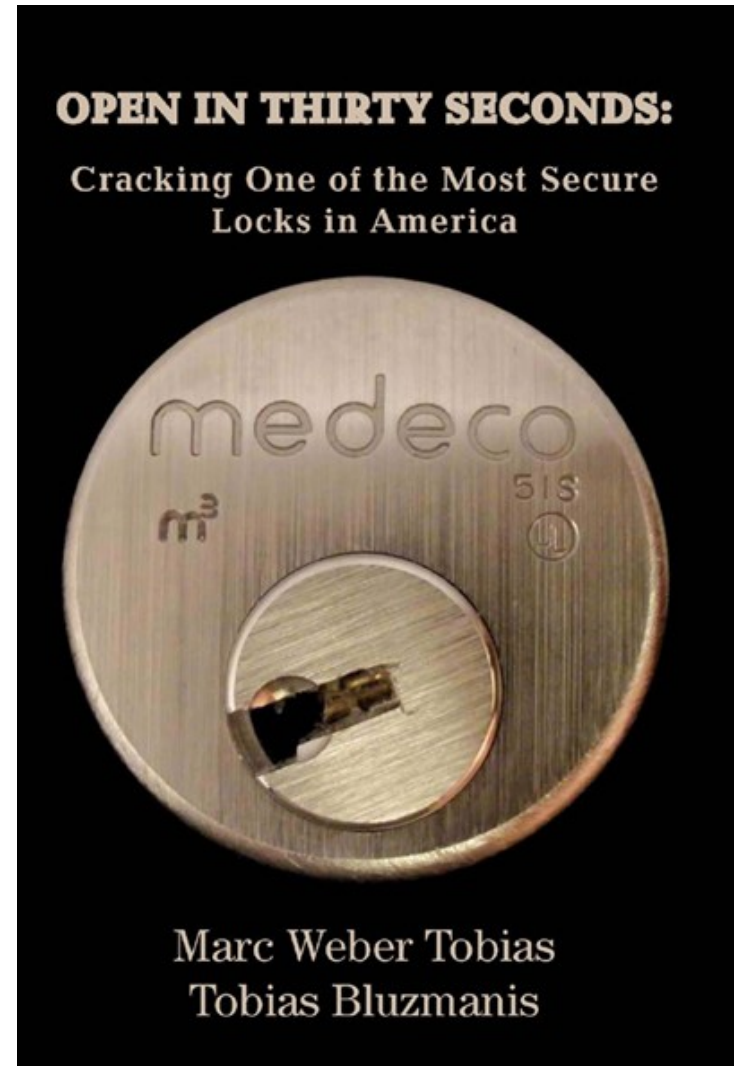
Medeco



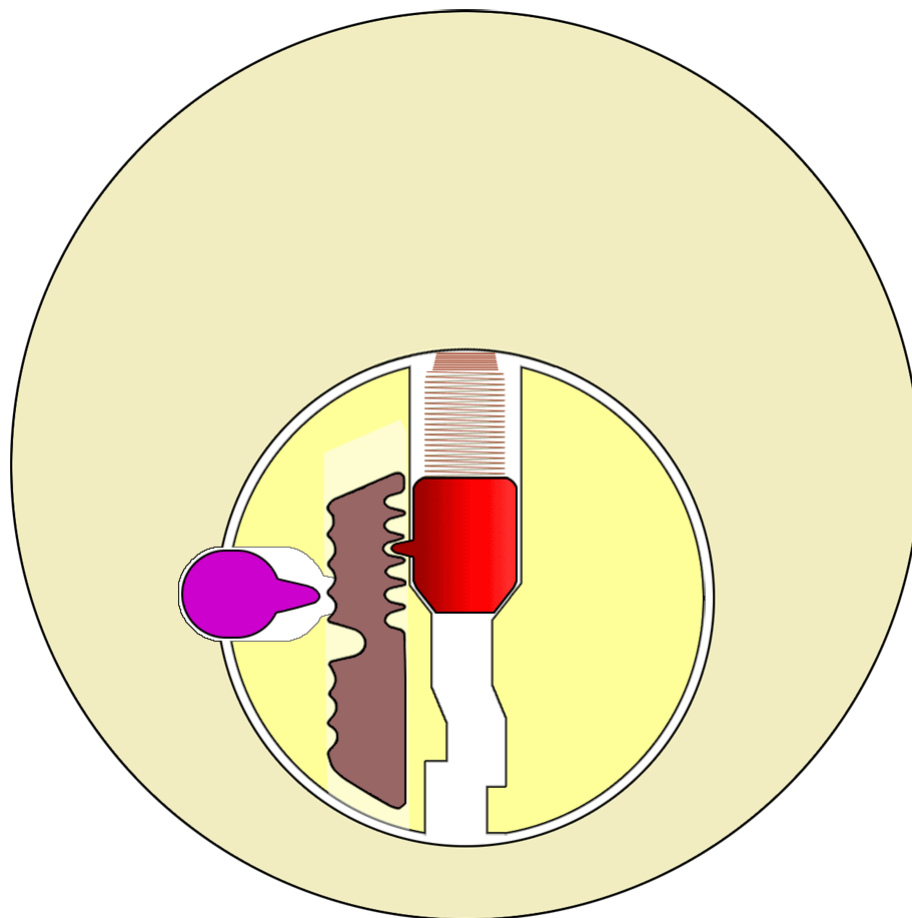
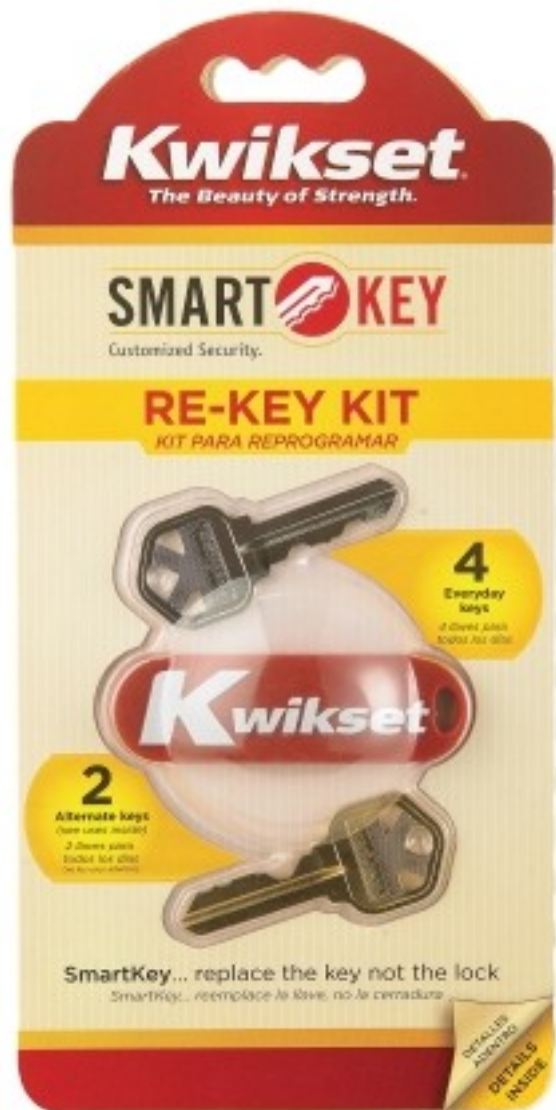
Successful Medeco Attacks



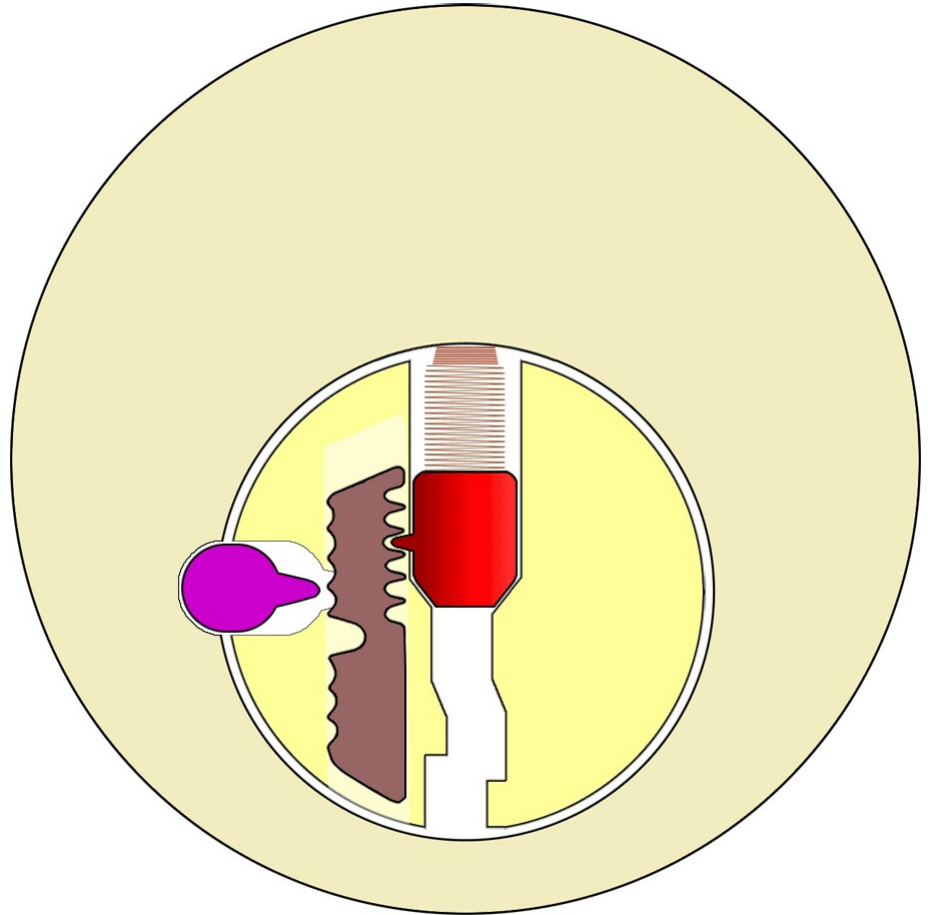
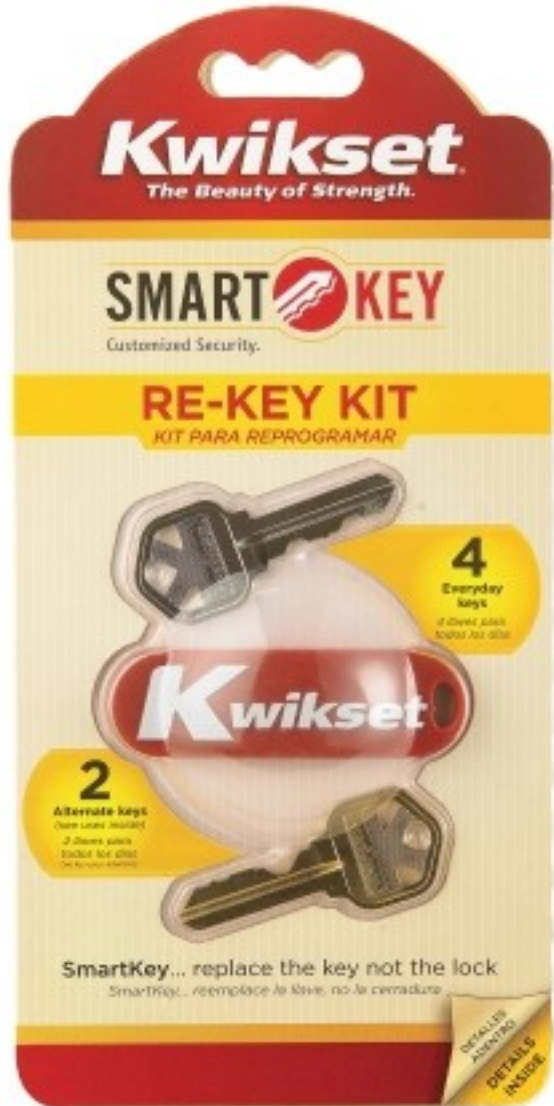
Marc Tobias
LockCon



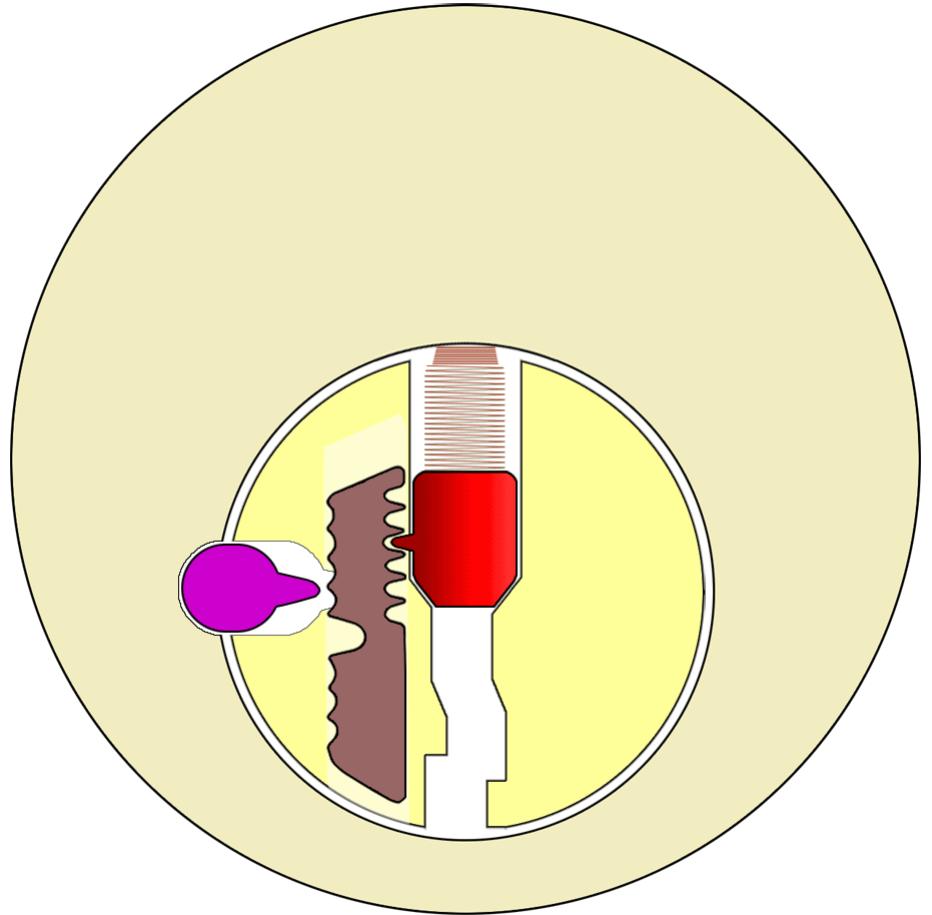
Kwikset Smart Series



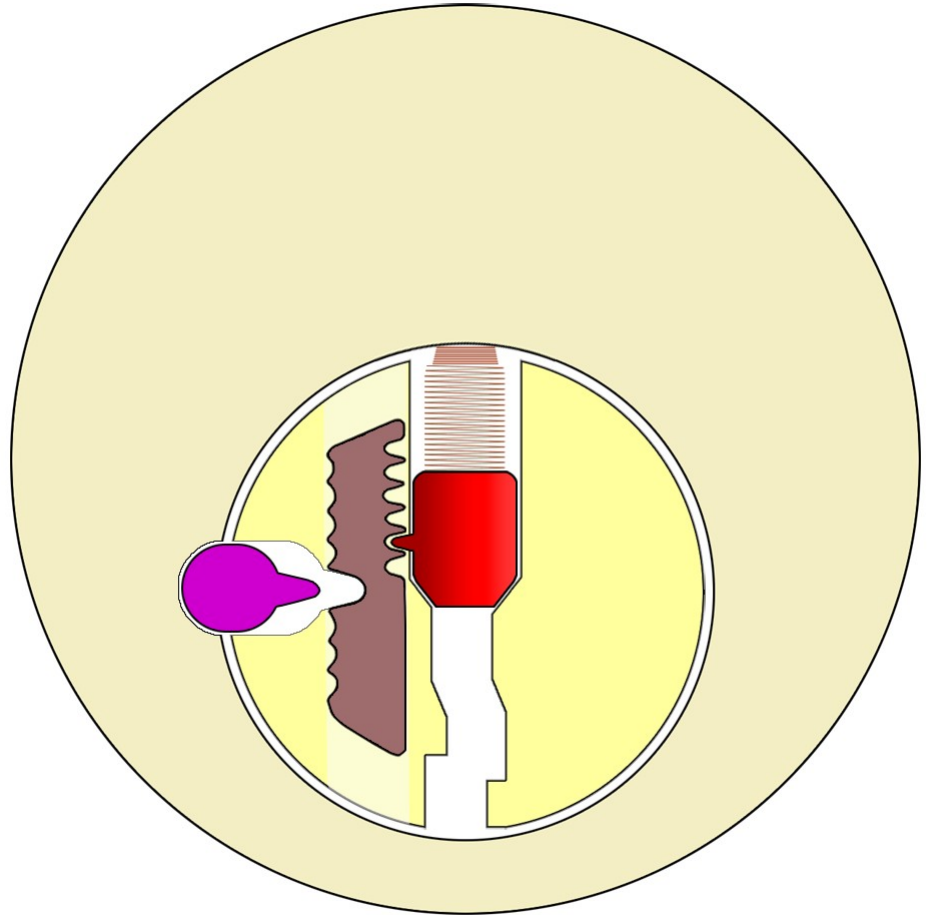
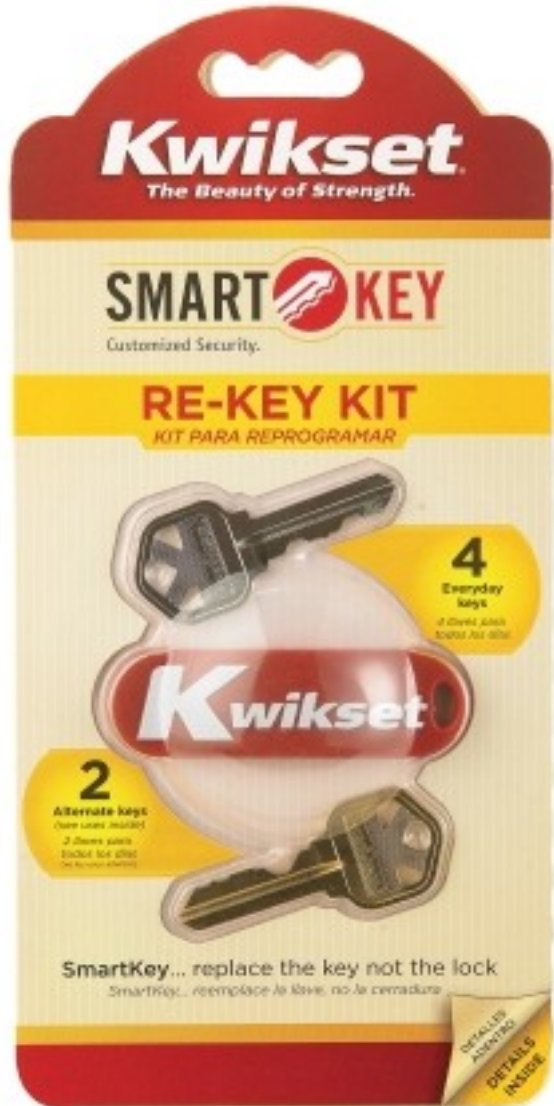
Kwikset Smart Series



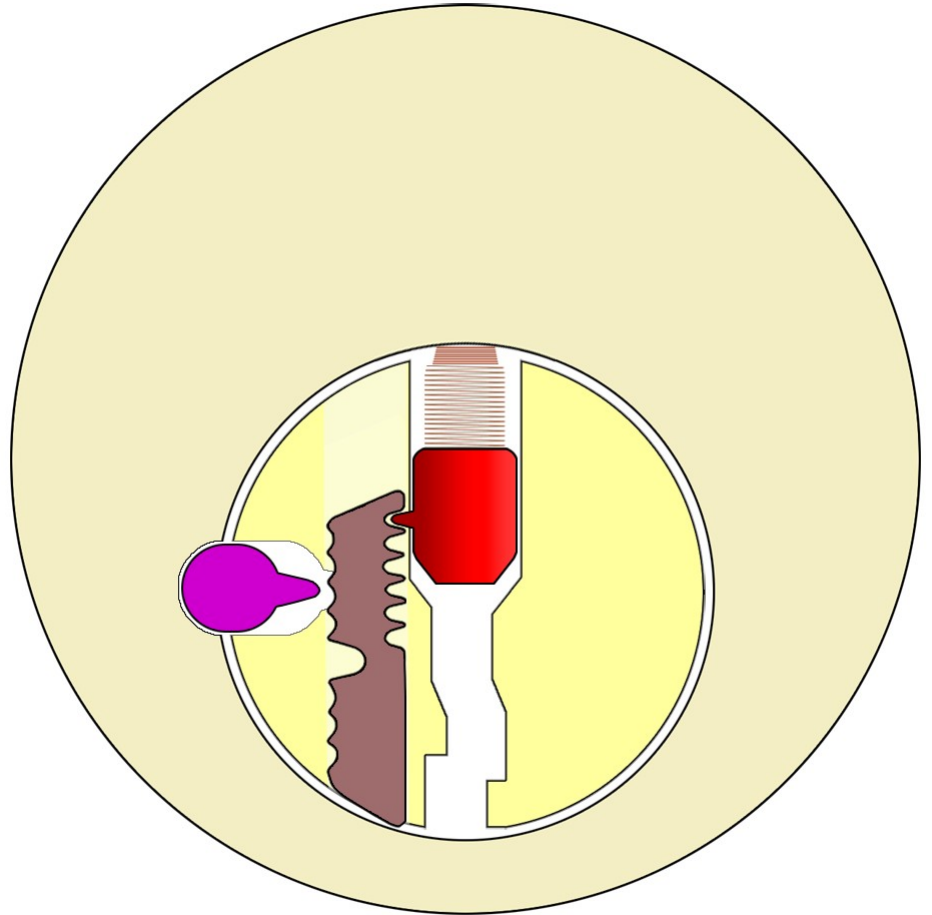
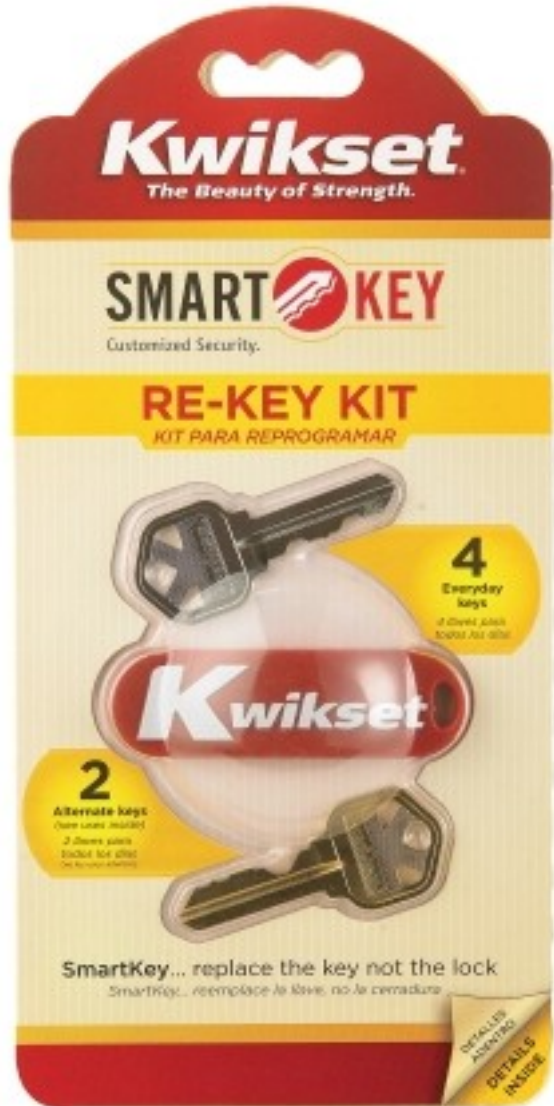
Kwikset Smart Series



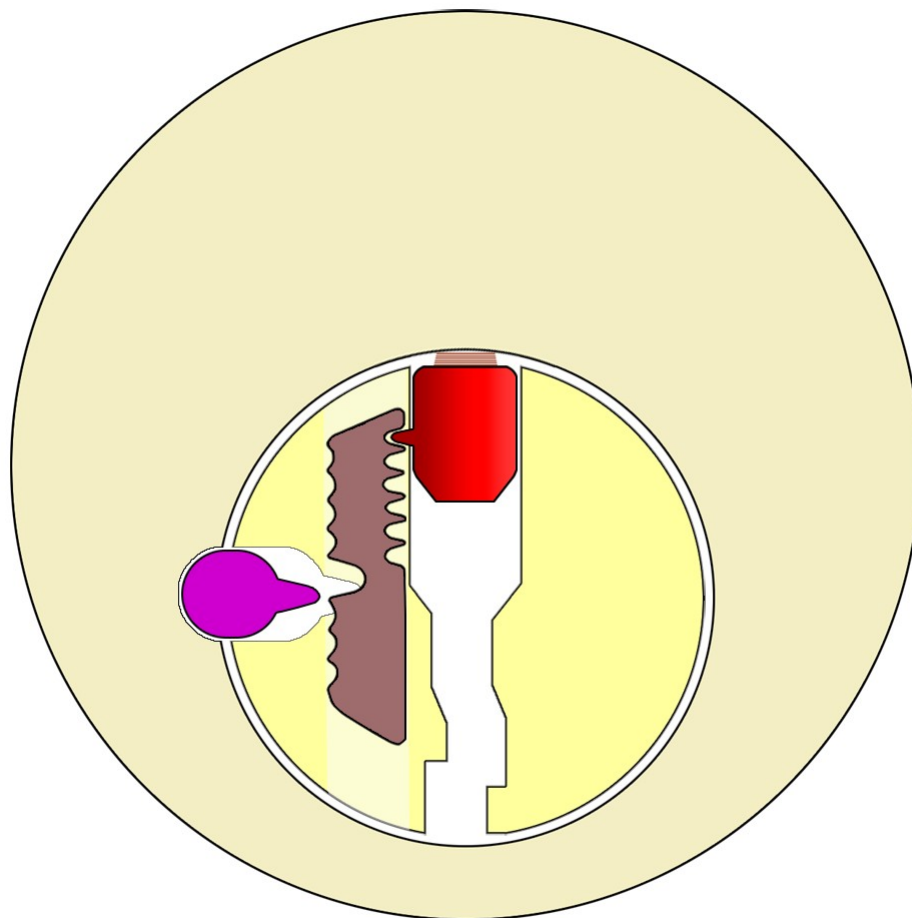
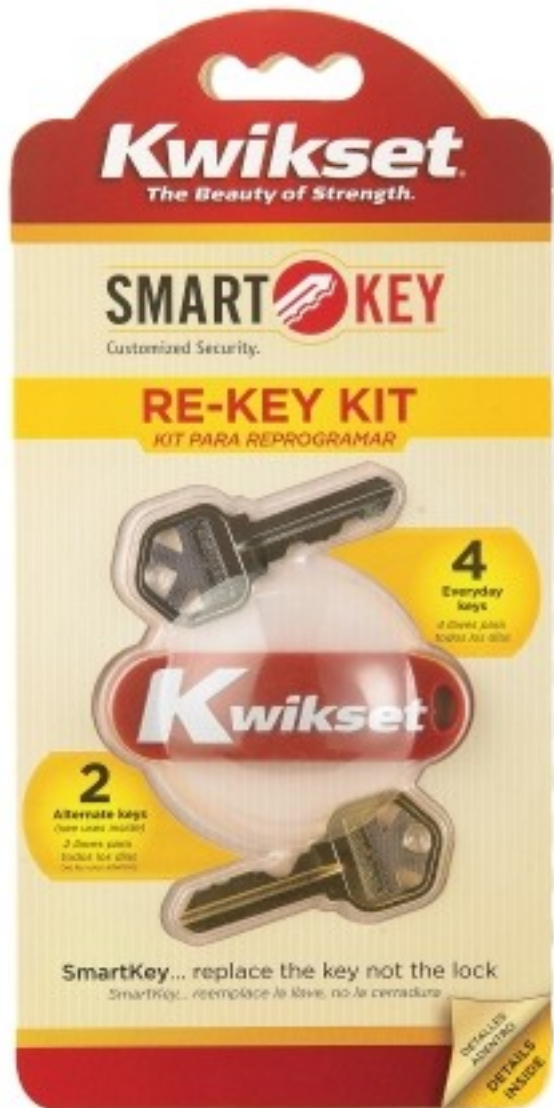
Kwikset Smart Series



Kwikset Smart Series



Kwikset Smart Series



Kwikset Smart Series



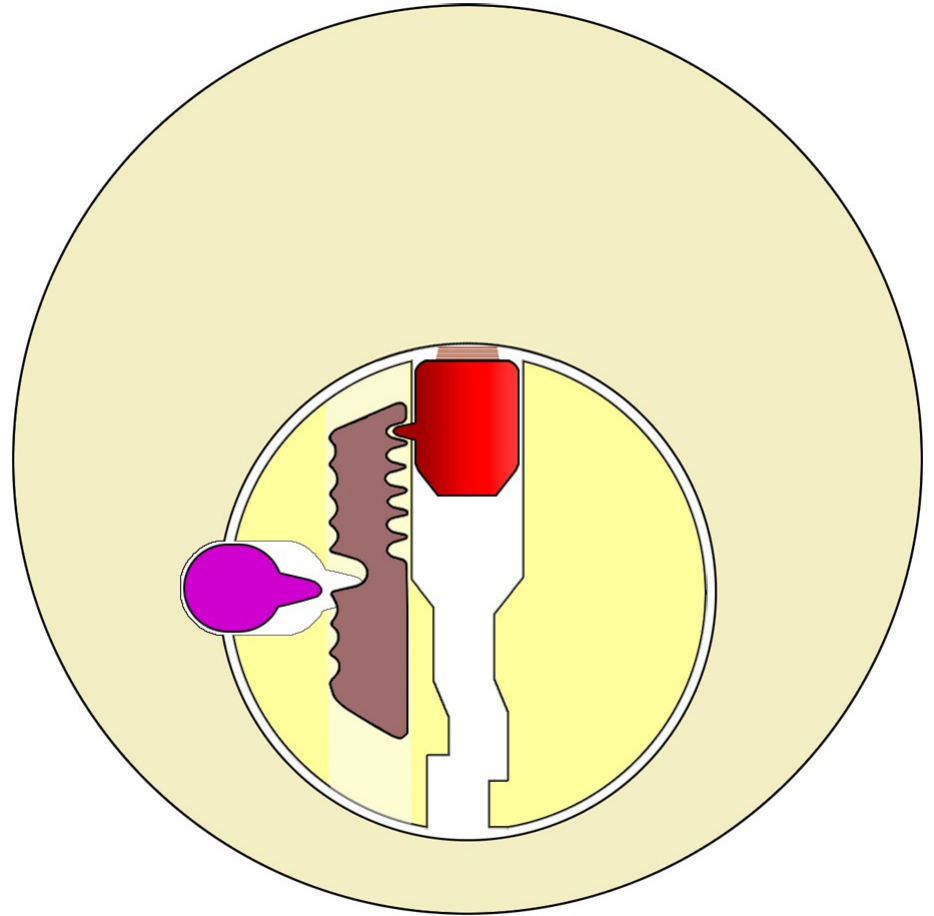
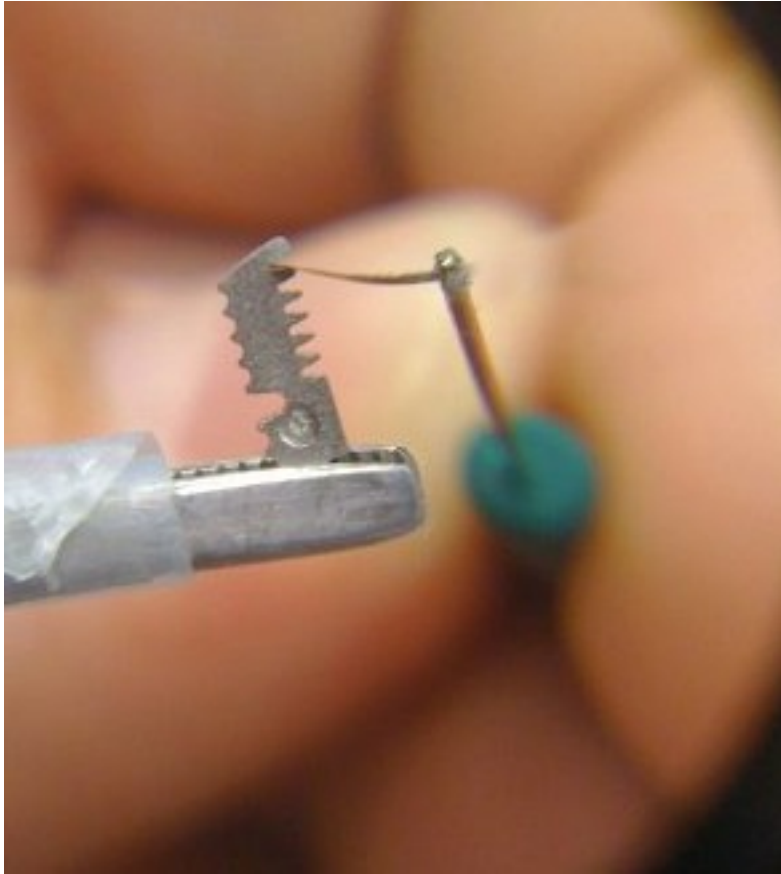
Kwikset Smart Series

research and photo by Shane Lawson



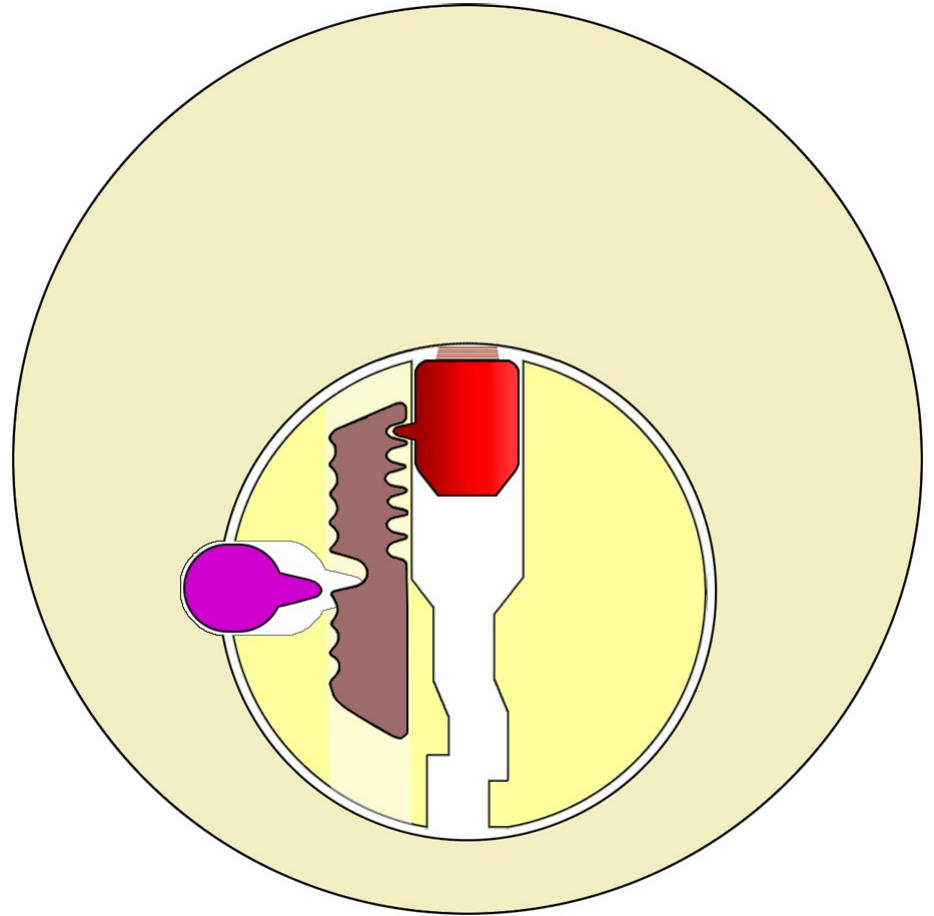
Kwikset Smart Series

research and photo by Shane Lawson



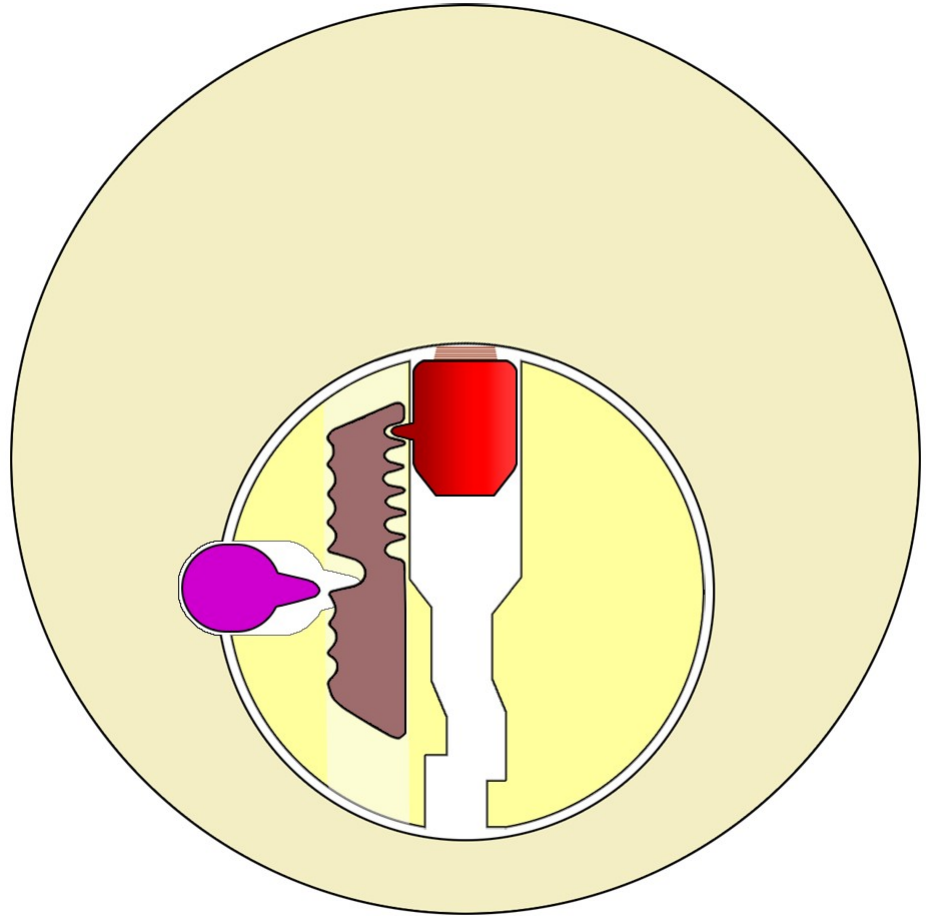
Kwikset Smart Series

research and photo by Shane Lawson



Kwikset Smart Series

research and photo by Shane Lawson



 **Informing Kwikset**

Kwikset Smart Series



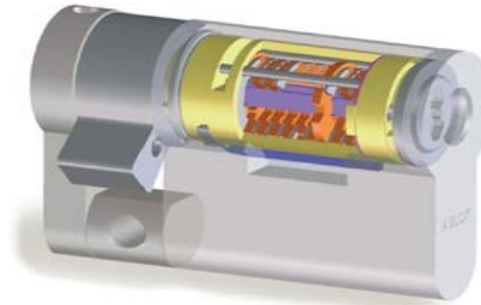
There's also this little problem...

 **Smasher Tool**

The Main Concept: Divide & Conquer...

Isolate Discrete Components

No Known Attack or Bypass



 **ABLOY**

**Prote
c**



EVVA

MCS



 **MTS+**
MUL-T-LOCK

Thank you very much.



<http://deviating.net>

<http://enterthecore.net>

<http://toool.us>



this presentation is CopyLeft by Deviant Ollam. you are free to reuse any or all of this material as long as it is attributed and freedom for other s to do the same is maintained